THE NATIONAL ELEMENTARY

Principal

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THIRTY-SIXTH YEAR OF PUBLICATION VOLUME XXXVI NUMBER 7

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In this issue . . .

". . . *when the only thing one can be sure of is that the future will be vastly different, what kind of education does one provide for those who will inherit that future? What kinds of learnings have value and relevance . . .? How much more important are questions like these than whether we should teach about Indians or Eskimos in the third grade!*" Harold McNally in "What Shall We Teach—and How?" p. 6.

". . . *while modern man has brought about the present 'calculability of abundance' by creative acts, he does not know how it was done. Until he knows more about it he cannot teach his youth how to do it. . . .*" Harold Rugg in "Schools of Creative Life—Unfinished Business in Education," p. 12.

"*As scientists gain greater and greater understanding and control of the forces of nature, it becomes of mounting importance for society to make the right decisions concerning the support of science and the control and utilization of scientific developments.*" Dael Wolfle in "Science and Public Understanding," p. 16.

"*Children begin totally dependent and from birth continuously struggle for independence. But they never completely outgrow their dependency needs . . .*" Robert Isenberg in "Competition and Cooperation in Our Society," p. 22.

Next year . . .

As part of next year's series, (see the editorial, p. 5) we will print three talks from the Annual Meeting—by Kenneth Cooper, Harold Drummond, and Alice Miel. Among the special features will be a complete topical index of articles in the magazine since fall, 1952. See the October issue!

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The Annual Meeting was a success! In interviewing people for the Evaluation Committee's report people often made more comments than they put on paper. They said it was the best planned and organized of any convention they had attended. Many mentioned that it was kept on a high professional level and that money did not form a part of nor enter into discussions. I can truthfully say that we have made great strides since the first meeting in Atlantic City.

Gladys Darling
State Representative
Waycross, Georgia

The Cincinnati convention was really outstanding in every respect. It truly represented the tremendous growth which our Department has made in the past few years. I heard nothing but the best of comments about this convention. You and the members who helped to plan it are to be congratulated for organizing such a wonderful convention. It was a great week in the life of our organization, and I am sure everyone enjoyed it very much.

C. Freaman Reid, Principal
Irving School
Dubuque, Iowa

I read with great interest the newspaper story, based on an interview with Dr. Eaves, which appeared in the *Cincinnati Post* under the title "Teaching Johnny To Read." Funny thing about it, my nine-year-old daughter Maggie, who was reading it over my shoulder, said "Where are you, Mother? I've finished." (I still had a paragraph to go!)

Mrs. Daniel H. Kunkel
Route 1, Box 129-N
Newton, Ohio

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by *MYRON LIEBERMAN*,
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John R. Rowe

John R. Rowe
Educational Director

This Year . . . Next Year

With this magazine we complete our five-issue series on "Background for the Instructional Program." While such a brief series could not treat all the important aspects of contemporary society, we hope it has focused attention on some of the things which are of most significance to educators who are responsible for helping to plan and direct learning programs for young people. The opening article in this issue, "What Shall We Teach—and How?," is a round-up article for the series. It identifies common strands which run thru the articles, points out further implications for education, and suggests ways in which educators may use the material in this 1956-57 series.

Because of the interest which has been shown in these articles on contemporary society, we are planning to reprint them in a single publication, similar to "Time for the Job" which appeared in 1954. This publication will be ready early in the fall. We hope the value of this year's theme articles will be increased by making them available as a single collection.

Next year's magazine program will be built in large measure on the 1956-57 series. The theme will be "The Principal and the Curriculum," and we shall try to provide articles which will help the principal and his staff analyze the program in their school and work to adapt it more closely to the needs of contemporary society. Two issues will deal specifically with two different curriculum areas which seem to be of particular concern to elementary school educators at this time—science and the social studies. We hope the series will be valuable in itself and that it will also add to the value and usefulness of this year's series—"Background for the Instructional Program."

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WHAT SHALL WE TEACH ....and HOW?

HAROLD J. McNALLY

To round out this year's series of articles on contemporary society as background for the instructional program, we asked Harold J. McNally, Professor of Education, Teachers College, Columbia University, to prepare an analytical summary of the entire series. In his article, Dr. McNally points out common or recurring strands in the series; identifies other facts or insights having educational significance; raises questions as to what these facts, insights, and recurrent themes mean for the educational program; and suggests ways in which these articles can be used in the exercise of instructional leadership.

Public schools are established and maintained to contribute to the welfare of the society they serve. The role of the schools in serving society can be defined without great difficulty—when the varieties of work done in that society are relatively few, when each individual's role is clearly defined and relatively unvarying, when the society remains reasonably stable in its institutions and values from one generation to the next, and when much of the teaching of the values and behavior appropriate to that society is painstakingly done in the home. This was the case in our country a century and a quarter ago. Children had limited vocational choices, lived in closely-knit family groups which gave them social, moral, and vocational instruction; and grew up to travel, dress, play, work, and even think in much the same patterns as those of their parents and grandparents. A straight-forward program of reading, writing, arithmetic, and history which emphasized nationalism and moral values served to discharge the school's responsibility adequately.

The problem of what shall be taught in the public schools of today's United States is considerably more complex. Schools today are being asked to assume many of the responsibilities formerly borne by other institutions. William Carr's article in this year's series contains a delightful listing of the subjects which we are urged, exhorted, enticed, or required to add to an already-crowded curriculum. On the other hand, tradition encourages us to cling to a curriculum which seems oddly impervious to the impact of contemporary epochal discoveries, to world-shaking and world-changing events, and to inexorable and profound changes in our society. How can we gain a perspective that will help us to modify our content and method to serve today's distinctly different world, and at the same time preserve basic values and avoid acceding to whims and riding current educational fads to unwise extremes?

In his important role of instructional leader, the principal needs such a perspective. The theme articles in this year's volume of THE NATIONAL ELEMENTARY PRINCIPAL have been an attempt to present some vistas in that perspective. A number of specialists who are students of the social scene have presented highlights of today's society which have significance for what we teach. While we recognize that these do not by any means constitute a comprehensive or thoro analysis, they do provide a background against which we may raise certain provocative questions, questions which should be raised as the principal and his staff consider whether what they are teaching is suited to the needs and demands of the world in which their pupils are living.

In this article, I have attempted to do several things. First, I have sought for common or recurring strands in the year's theme articles. Second, I have tried to identify in these articles other facts or insights which appear to have con-

siderable educational significance. Third, I have raised some questions as to what these facts, insights, and recurrent themes mean for the educational program. And, finally, I have tried to suggest some ways in which a principal might use these materials in the exercise of his instructional leadership.

Change—The Order of the Day

In this year's theme articles, one motif stands out above all others: *change*. Time and again the authors refer to the fundamental changes that have taken place and are taking place in today's world. Kenneth Cooper quotes an Indonesian as saying that his country is living in thirty different centuries at the same time. Thomas Carskadon reports that whereas muscle power accounted for two-thirds of all productive power in the United States a century ago, today—only three generations later—it accounts for only one percent of the power doing America's work. Again, we are told that in the past half-century our leisure time in the United States has nearly doubled and seems likely to increase still further. And so it goes. Crowded into the lifetime of people still living have been more fundamental changes, perhaps, than have taken place in any thousand years of human history heretofore.

Not only is this change rapid; it is accelerating. Within a relatively few years, we have broken thru the sound barrier, split the unsplittable atom, put an earth satellite into production, flown non-stop around the world, projected pictures of events as they happened onto screens thousands of miles away, seen Jules Verne's *Nautilus* become a reality, built jet aircraft that streak across the entire United States between lunch and dinner, and have conquered almost all of the dreaded killer diseases of mankind. Every year it takes less time to accomplish the impossible. In a recent article in the *Saturday Review*, an eminent medical authority, Lawrence Kubie, made the incredible statement that within the foreseeable future we shall discover how to prolong a human being's life indefinitely![1] Consider these changes against the fact that they are happening in a society in which the population is increasing in unprecedented numbers. Ralph Tyler stated that it is now "possible to say that approximately half of all the adults who have ever lived in the world are still living." In other words, the world won't stay put. Already, many of the things you and I learned in school are either obsolete or downright untrue.

What does this mean for the school program of today? Much of our current school program educates children for today's world, assuming that it will be substantially the same when these youngsters are adults. This was once a valid assumption. But when the only thing one can be sure of is that the future will be vastly different, what kind of education does one provide for those who will inherit that future? What kinds of learnings have value and relevance in a rapidly changing world? How can we deal with history so that children will be able to set today's kaleidoscopic cultural shifts in the long perspective of human progress? What values can we try to develop with today's children that will serve as stable guides in a world of apparent impermanence and protean values? How much more important are questions like these than whether we should teach about Indians or Eskimos in the third grade!

The final fact worth noting about change is its all-pervasiveness. It touches all segments of our life and is worldwide. The facts of change are obvious, tangible, omnipresent, and irrefutable. How do we, or how should we take account of this in planning educational content and method? Margaret Mead suggests that we exploit "the unused capacities of childhood" and "accord the imagination of childhood . . . recognition and underwriting." She maintains that our educational program should provide for more diversification of experience.

Leisure—for Whom? for What?

A second strand that ran thru many of the articles was the fact that the leisure time of the members of our labor force is increasing, and will continue to increase. This fact was noted by educators years ago, and for three decades we have talked glibly about "worthy use of leisure." Yet as a nation and as a profession we have not recognized the fateful implications of this development; or if we have, we have not faced up to them.

[1] Lawrence Kubie. "Hidden Brain Power," *Saturday Review*. Volume 39. Oct. 13, 1956. p. 26.

"Future historians," says Shirley Cooper, "will doubtless point to leisure time for the common man as one of the outstanding achievements of this age." With increasing life expectancy there are already many whose total "working years" are less than half their total life. Probably the majority of our working force now work only about half their waking hours. Millions seek ways to kill time outside their working hours; after retirement they kill time until time mercifully retaliates.

Yet not all share equally in this increased leisure time. It is primarily the less "educated" nonprofessional groups who have inherited this new leisure. In professional, executive, entertainment, and other service occupations, there are many who have all too little leisure; paradoxically, this group is probably better prepared to use leisure constructively.

What can we do in our schools to help make leisure the blessing we have envisioned, rather than the catastrophe it could become? How should our educational program today differ from what it was when the 60- to 70-hour week prevailed? I have heard it said that education for retirement should begin in the kindergarten. Whether in kindergarten, fifth grade, or tenth grade, what kind of education should it be? Do ascetic, intensified academic programs for gifted children contribute to this objective? Do we teach our pupils recreational activities which are rewarding and practicable thruout life? Do we help children catch the excitement of learning so that the days, and life itself, are not long enough for all the enchanting things they want to do? Or does their schooling result in aversion to learning, so that they become skilled in avoiding it, and seek the opiates of vacuous, effortless, unstimulating entertainment? What kinds of recreation recreate? What do the answers to these questions mean for educational planning and practice in elementary schools? I fear we haven't grasped the seriousness of this question, for leisure is something we are accustomed to thinking of lightly. It is time for us to get serious about it.

Mass Communication—A Mixed Blessing

Wilbur Schramm and others of our authors dealt with the changes and problems of communication in this jet-propelled society. To cope with the flood of printed, typed, telephoned, telegraphed, broadcast and televised information, today's school product has to be educated in far more of the communication arts than has been usual in the teaching of the first two of the 3 R's. Carr speaks aptly of "the pressure of the press, the radiance of the radio, and all the props of propaganda" which assail today's citizen at every turn. What are our schools doing to teach discriminating reading, listening, and viewing? There is much evidence that great masses of our populace are the easy dupes of the unscrupulous advertiser, the shrewd and unprincipled demagogue, and the eloquent hate-monger. Has your staff discussed curriculum content and method that will help children to analyze and identify propaganda of the domestic as well as the Russian variety? Are the children in your school learning how to evaluate television programs? Have they learned to spot slanted news in the daily press? Do they learn to differentiate the demagogue's specious reasoning and unsupported generalizations from documented fact? Are they being helped to know half-truths and unsupported allegations in advertising? These are questions a staff should not neglect, for these learnings should start in the elementary school.

An Economy of Plenty

A fourth development mentioned by a number of our authors is the astonishing productivity of the United States. Our overworked superlatives just don't do justice to the fact, quoted by Carskadon, that:

> The United States, with little more than 6 percent of the world's population and less than 7 percent of its land area, now produces and consumes well over one-third of the world's goods and services, and turns out nearly one-half of the world's factory-produced goods.

What account have we taken of this in our schools? Are the children in your school going to be better consumers of this fantastic flood of fabulous fabrications because they were your pupils? Are they learning the difference between "cheap goods" and real bargains? Are they developing standards of taste? Are they learning to resist high pressure salesmanship which, as one wag put it, "Gets people to spend money they don't have to buy things they don't want to

serve needs they don't have"? Are they discussing how this marvelous productive capacity could be used to help mankind, or are they being taught that this is a weapon with which to win the next war? Or is it treated as a "hat trick," a magnificent curiosity?

The World IS in Our Backyard

Another aspect of this productivity is the almost unbelievable disparity between the United States and other nations. This fact is part of the international understanding so urgently required of Americans, and needs to be seen in relation to other aspects of our place in the international picture. Do our children learn of the delicate economic, political, and military interrelationships in the world today? Do we know enough about these things ourselves? If we were to examine our teaching in social studies and current events in the light of Vera Dean's article, how would that teaching look? What are we teaching of the proud and important history of the countries of Africa and the East? Are our children being helped to realize that they may live to see the locus of the world's great power once again among those people who are now referred to as "underdeveloped"? Are we able to help children see America's policies and actions from India's or Egypt's vantage point, as well as from our own? Do we help them (as in Edward Steichen's impressive and moving photo epic, *The Family of Man*) to appreciate the bonds that unite all peoples, or do we teach them the divisive peculiarities, the "queerness" of "foreigners"?

What should we be teaching about sovereignty? About colonialism? About race and prejudice? About the United Nations? Ignorance or narrow dogmatism with respect to the issues involved here could mean the death knell of America's world leadership within a generation. Great forces are astir among the long-dormant peoples of the East and of Africa. Earl Mazo, commenting on Vice President Nixon's recent visit to Africa, said: "He [Nixon] is convinced now that within twenty-five years the 'Dark Continent' will be the decisive area, that it will hold the crucial balance of power in the world."[2] Our children should be learning of these peoples with understanding and respect.

[2] *New York Herald Tribune*. Saturday, March 2, 1957. p. 10.

Some Other Items

All the above "strands" seemed to run thru this series of fascinating articles. In addition, some other developments which were referred to in only one or two of the articles are of considerable importance.

Urbanization. The development of the "urban region," and the fact that the United States has become a predominantly urban nation has far-reaching implications for education. Philip Hauser reminds us that: "Any reexamination of the instructional program . . . might well inquire into the adequacy of that program . . . in preparing students for the changes in social organization and in thought and action characteristic of urban existence." What can schools do to help children and adults live satisfyingly in "the lonely crowd" of these great impersonal centers? How can we educate for the role diffusion characteristic of the specialization of today's urban life? Tyler suggests that the way we handle education for group membership may help answer these questions. How can we help individuals develop a sense of responsibility for their own fates and a feeling that they can influence social and government processes? John Dawson tells us that democratic government is supported by people seeking opportunity to act as responsible persons. What should we be doing in our schools to help children learn desirable avenues for exercising their citizenship responsibilities in a responsible manner? How can we help children grow into men and women who will rise above petty partisanship and narrow vested interests, and realize that to act in the interest of the larger society of which they are a part is to act in their own best interest in the long run? The practical answers have to be found in our schools and classrooms.

Changes in family life. Growing out of and influencing these and many other changes has been a basic change in family functioning and relationships. Divorce is prevalent. For various reasons, parental supervision of children has decreased, resulting in what Fred Hechinger calls, "the creation of a new category of youngsters, the 'door key kids'." Parents are uncertain about

their authority roles with respect to their children. Many of us can remember when dinner time was determined by Dad's homecoming hour, not by the children's television program. Fewer real tasks and recreations are engaged in together by family members today. As families grow up, the children tend to disperse, and often live hundreds of miles from their parents and from one another.

Of what, then, does "worthy home membership" now consist, and how can the school educate for it? What should be the division of responsibilities between home and school? For how much of the education of "the whole child" can the school be expected to assume responsibility? What technics of home-school cooperation will foster children's best growth?

The trend toward standardization of taste, style, thought, and behavior. Mass communication, mass production, and population mobility —all referred to in this year's theme articles— have resulted increasingly in our wearing the same styles of clothes, listening to the same TV comedians, singing the same songs, reading the same best-sellers, living in identically designed homes, eating the same frozen foods—and there are those who have aspired to get us all to hold the same beliefs. Kenneth Cooper pointed out the need for encouraging diversity in the face of all these pressures toward conformity. "The cultivation of idiosyncrasy," as Benjamin[3] called it, should be one of the major goals of our schools, for we sorely need such unique kinds of persons as Francis Bacon, John Stuart Mill, Thomas Jefferson, Henry Ford, Arturo Toscanini, Albert Einstein, Emmett Kelly, Marian Anderson, and Jonas Salk. How can we focus individualization in our schools on such an objective? All too often "individualization" has meant special attention to some pupils so that all may be elevated to the norm, which is by definition mediocrity.

Cooperation and competition. It is a rather common assumption that we live in a highly competitive society. Schools which stress cooperative activity and minimize competitive activity are sometimes criticized on the grounds that they are "not facing reality," not preparing children for a competitive society. Robert Isenberg points out, however, that a careful analysis of our business and industrial structure and of our activities as social beings indicates that, actually, cooperation is a more potent factor than competition. Our success in most of the things we do depends upon our ability to cooperate. What does this mean for anyone—parents or teachers—working with children? Are we actually more "realistic" when we work to develop technics of cooperation than when we stress competition? Do we need to reexamine the use of competition as motivation for learning? Do we need to learn how to help children develop a kind of "beat your own record" competition?

The need for social invention. Perhaps the root implication of our theme articles, hinted at here, implied there, and stated clearly in a few instances, is our desperate need for social invention. Dael Wolfle asks urgently what society will do with all our material inventions and advances, and asserts that these are "questions [which] affect all mankind, and the answers that are arrived at should result from the thinking of other men, and not of scientists alone." Harold Rugg says, in effect, "create or perish." But our creations must be social as well as technical inventions. And our social inventions will inevitably involve moral value decisions. They will deal with the control and government of our technological advances and, as Dawson maintains, government in a democracy is the result of decisions of the people. In our curriculum planning, how shall we provide for the cultivation of Rugg's creativity, (which Mead maintains we have hardly tapped in today's schools), of the values Wolfle pleads for, of the responsible citizenship which Dawson says is necessary to maintain accountable democratic government? These questions will not be answered by philosophers or "authorities" in high places. They can be answered only by thousands of principals and teachers in public schools thruout the land.

So What?

Granted, you may say. Of course these are important questions. But what am I to do about it all? Each reader will have to answer such a question for himself, of course, but several possibilities come to mind.

[3] Harold Benjamin. *The Cultivation of Idiosyncrasy* (Inglis Lecture). Harvard University Press. Cambridge, Mass. 1949.

Since 1950 the number of local principals associations has increased substantially. Could not these articles serve as texts for group discussions at some of the meetings of these locals? One can envision round-table discussions, each table discussing the implications of an article's content. Consultants from outside the field of education as well as from within it could be enlisted to help in such discussions. Annual meetings of principals state or county organizations might use a somewhat similar pattern. Plan such work conferences so that all who attend will have opportunities to participate actively and do some rigorous thinking.

These materials could also be used with local curriculum committees, particularly (but by no means exclusively), by committees which are concerned with the social studies and the language arts.

Perhaps the most obvious use of these excellent papers is in staff meetings in local schools. If your staff committee for the planning of such meetings thinks well of the idea, copies of the year's theme articles (which are to be gathered together in a special publication) could be obtained (single articles could be mimeographed) and placed in the hands of each teacher. They could then be made the subject-matter of discussion at some staff meetings, where principal and staff would appraise the curriculum and methods in the light of the ideas developed in one or more of the articles and related readings. In this respect, it would probably be better to focus on one area, such as *communication* or *leisure*, use the theme article as a point of departure, and have various interested staff members assume responsibility for doing related readings chosen from those suggested in the article or from other sources related to the topic. In larger school systems, central office resource personnel can be called upon to help out.

One question which is often raised by elementary school principals is, "What can we do to infuse some vim, vigor, and vitality into our Parent-Teacher Association?" Why not involve them in discussions of these issues? Instead of a painful harangue or limping stage pageant, garnished with coffee or punch and cookies, let parents jump in with both feet and discuss some of these same problems and issues. If such discussions are well planned (as any PTA meeting should be and as many are not), not only are the participants likely to be interested; some good ideas may be harvested for use in the school program.

For those parents who are interested in delving more deeply into these topics, parent or parent-teacher study groups might be formed, which would hold meetings extending over a semester or a year. Such groups should have a goal, such as being asked to submit to the faculty any recommendations growing out of their deliberations. In such case, it should be clear that they are responsible for *suggestions*, not *decisions*. These activities with parents are valuable public relations, helping parents gain insight into the problems faced by teachers and principals, and letting them see at first-hand our efforts to provide an improving and appropriate education for their children.

It may not seem strange for me to suggest that these materials might be used as subjects of discussions with college students in education, particularly those who are preparing themselves for leadership positions (such as principalships and supervisory posts) in which they will have responsibility for leadership in curriculum improvement. Where they are not used as primary texts, they will certainly constitute valuable supplementary reading in discussions of curriculum content and organization.

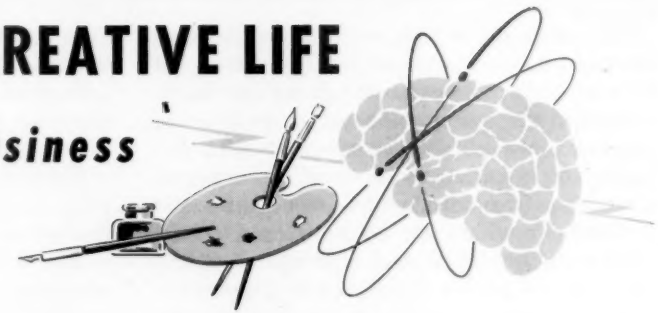
Finally, these articles, and others like them, should be read and meditated upon by each of us individually. The game we are playing is "for keeps." It may be impressively unoriginal to say it, but the education we give to the current generations is likely to affect profoundly the course of human history.

The ideas and developments dealt with in this series of articles deserve our thoughtful consideration. In an earlier issue our Editor said: "For if these things are true, then they have real significance for education. They are not just interesting bits of information; they are guides to sound educational planning and practice. But they become truly valuable only as they make their way into the thinking of many people. Between the covers of a magazine they are simply accessible; within the minds of men they come alive."

That's a challenge if I ever saw one!

SCHOOLS OF CREATIVE LIFE

. . . Unfinished Business in Education



HAROLD RUGG

Suppose, in order not to ignore the lessons of history, we were to ask ourselves two questions. First: What have been the significant achievements of the elementary schools since World War I? Second: What are the major items of unfinished business?

My answer to the first question would be: the leavening of the life of the school and the recentering of the program on the conceptual understanding of the modern world; in curriculum terms, substantial beginnings in the social studies and the natural sciences. As for the major item of unfinished business—a clear understanding of what the creative act is and how to cultivate it in the schools. This is the theme of the present article.

My concern with the creative process is the product of years of research, the results of which are to be published shortly in Volume I of *The Imagination of Man*. Its logic rests upon an appraisal of the special stage of industrial culture to which advanced western nations, particularly the United States, have now arrived. While our own people now have the physical makings of the abundant life within their grasp, it is the consensus of students of industrialization that these mid-century years actually constitute a world crisis in technology, popular understanding, and creative statesmanship. The acceleration in atomics and electronics has posed the question as to whether or not man can survive a completely technologized society. Atomics—the energy factor—has now brought us to the verge of limitless energy, "free—just like the unmetered air." The nuclear and electronic revolution transforms everything it touches. Witness, on the negative side, the menacing blast and heat and hideous lethal effects of radiobiology; on the positive side, approximate automation in production, medical gains in radiobiology, an effective Informa-Theory and Communication Control in the machine, and provocative new theories of human behavior, learning, and education.

Fortunately, since I am writing in THE NATIONAL ELEMENTARY PRINCIPAL, I need not document the assertion that we have already moved far into a new epoch which promises physical abundance for our people. That was well done in the December 1956 number by Thomas Carskadon's excellent digest of the Twentieth Century Fund's monumental study of *America's Needs and Resources*. As its chairman, Adolf A. Berle, Jr., said, even tho we are living in "a time of turbulence and terror . . . it is endowing [the] children . . . with resources beyond the dreams of past generations." It is "distributing its benefits well enough to give an overwhelming majority of Americans . . . the highest standard of living ever achieved by a great population." By 1960 our total national output will be nearly $500 billion, with a family income of $6000 a year, and the working week is now down to practically 40 hours. "The mass of the people have been the chief beneficiaries of this great material progress." And ". . . this momentous development has been taking place not in communist Russia but in capitalist America."

The fact is now unquestioned that we are living in the most dynamic state of human history. Not only is our time one of swift social change, but its most arresting trait is that of *acceleration*—namely, the increasing *rate* of change. For those who design the educational program there is admonition in this fact. We should take a leaf

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from the book of the communication-control engineers who, in World War II, learned to build self-aiming, anti-aircraft guns so that they would point at the place where an enemy airplane *would be*, not where it was, or is. While aiming our school design, in part, at the lives of the children today, it must also be focused on the lives they will be living as mature young parents when their own children will be in the elementary school.

First Order of Business

Confronted in such a dynamic civilization by a serious lag in the people's understanding, an emphatic injunction is laid upon the schools of the world. This is *to devote themselves primarily to producing dynamic men and women of creative imagination, even if this involves giving priority in the national budget to a minority of talented youth.* In the new epoch into which the advanced "automated" societies of the earth are moving, the dominant theme of life itself is creative. Today, the chief "Men Wanted!" advertisement of the industrial leaders of big business, the editors of such magazines as *Fortune*, and the heads of the great financing foundations, is "Wanted: creative men for a creative civilization." Everywhere "the great talent hunt" is on. *The New York Times* editorializes about "the yearly forays of company scouts into our colleges in search of 'promising material'." Gordon Brown of the Massachusetts Institute of Technology says: "What we need is a new kind of young man, possessing . . . the bubbling energy to bring about a dynamic society . . . technical education is . . . exposing young people to a *creative* environment." The Carnegie Corporation announces that its funds will be given, chiefly, to creative youths. This has been the theme of the industrial laboratories since Willis Whitney established the first one and began hiring only men of big imagination and curiosity. Today, therefore, we sense a clear cultural imperative to make *creative* education the *first* order of business in the schools.

This is a big order calling for more than preparing a generation of young people in "the creative arts" for a life of increasing leisure time. (It is very doubtful, in fact, whether in the foreseeable future the working day will drop below 30 hours a week. In any event, the positive goal of preparing for *creative work* promises more than that of preparing for esthetic leisure.) We must now answer the fundamental question that affects the sciences and technology as well as the arts: What takes place in the creative act? How *is* a poem made? A house, a bridge, a motor designed? The ceiling of the Sistine chapel painted? The atom split? The square-of-the distance principle comprehended? The Declaration of the Rights of Man stated? Each of these, whether of art or of science, was produced by *creative* acts.

Each of those was a statement of *imagined* conception. Was it "thinking" that brought it about? Or the nebulous thing called "feeling"? Or a fusion of both? What are its organs? Does its initiation and control reside in a God-given soul, as Maritain thinks? In the electrical impulses of the brain—old or new, as McCulloch and the cybernetics group think? In the hypothalamus or other parts of the midbrain? In the autonomic system? In the muscular system of the torso, or in the chemistry of the visceral system? In the reports of the separate senses or in the intuitive prehension of them all, as Whitehead thinks? Or in just pure "mind"? Where? In another place I shall give my present answers to these and other insistent questions.

I am emphasizing two points here: first, there are great gaps in the basic psychophysiological and esthetic understanding of the students of the creative act and process, let alone that of the teachers in our schools and colleges. The second point is that the creative act is the indispensable first step in the scientist's work—namely, the drawing of his hypothesis—as it is also in the artist's solving of *his* unique problem. It is one of the major premises of the world's creatives that *the great hypotheses and discoveries of science have been made by the same processes of the imagination* that built the esthetic monuments of mankind. Irrespective of chosen medium, each of the famous company of scientists, philosophers, statesmen, social engineers, poets, musicians, painters or other artists, has worked as creative worker, molding a miscellany of materials into the one best organization which will state his own unique view of life and the world.

This is the Great Doctrine of the quiet mind

of creative imagination which sensitive men of both East and West discovered and rediscovered recurringly. Later I shall return to this problem briefly, but I turn now to a more promising side of the picture—namely, *the teaching of the creative arts.*

Teaching the Creative Arts

Fortunately, in attacking this side of the creative task, we can build on a full generation of experience. Forty years ago a few forward-looking schoolmasters put a novel idea into practice —namely, that of bringing creative artists into the schools as teachers. "If you would have a child write," they said, "bring him a teacher who is a novelist or a poet, a master of the art of writing. If you would have a youth make music, set an expressive musician to teach him." So with each of the expressive media. It was in this manner that the conception of *artist-teacher* came to be added to the growing idea of the master teacher—the student of personality. It is a two-fold concept: *first,* practicing creative artist who, having passed the expressive processes thru his body, knows what expression is "internally, in its own terms;" *second,* teacher, one who is sensitive to the needs of expression in another, alert to the task of drawing out his statement-making originality, and aware of the role of rigorous technical mastery. Because he is creative, both as artist and teacher, we call him "artist-teacher."

Thus in the '20's and '30's, wise administrators, carrying out their revolutionary idea, brought artist-teachers into the schools and with them a creative renaissance in American education. They drastically altered the daily program, cutting down the time given to facts and skill, setting aside daily creative work periods and developing the integrated study of the creative and appreciative arts. This took two forms: the personal expression of the children and the close integration of these arts with the social studies. By the late 1930's thousands of teachers were working this way with their children.

Then came the distressing setbacks of the 1940's. In the war years, the struggle for survival came first, even in the schools. In the late '40's and early '50's the disgraceful social hysteria of McCarthyism made the creative way suspect, "subversive," along with the social studies, and this brought a dismaying retreat in the schools from everything progressive, including integrity of expression. Frederick Redefer's *Eight Year Study Eight Years After* confirmed the conclusion from my own revisitation of the Thirty Schools—namely, that most of the gains on the creative side had been lost.

But the post-war decline seems definitely to be over. Now, in the late 50's, we sense the dawn of a new day, a recrudescence of the creative way of working and living. And this time it is supported by the prestige of the leaders of technology and business as well as by those of thought and the spiritual life. For the first time in our historical epoch, nothing should hold us back in the schools.

Essence of the Creative Way

What then, is the essence of the creative way of expression in the arts, which the educational renaissance taught us? There is an old story of early Lincoln School days, simple but also subtle, that will bear re-telling for it takes us to the very heart of the matter. A woman visitor in a third grade, watching a child artist paint at his easel, asks: "What is it you are painting?" Going on with his work, the boy tells her briefly; but she shakes her head, saying: "It does not look like that to me." Unperturbed, and without looking up, the boy remarks: "It would, if you were I."

There it is, the essence of creative expression. "It would look like that if you were I!" Of course, for it is *his* statement, not the woman's; *his* idea, *his* way of seeing things and saying things—not hers. "I say what I see or feel—my way. I say what I am."

There is an important distinction here. Note that in the painting the boy was making his original statement of something he had created in imagination; he was not finding his answer to a common technical problem for which her answer would have been the same. If, for example, he had been drawing an exact, to-scale, plan of the schoolroom, his drawing would have "looked like that" to her. But he was not: he was painting his expression of the product of his unique imagination, and that is the heart of the matter, so far as the creative arts are concerned. That is what Walt Whitman visualized for an expressive

America: "Each saying what belongs to him, and to none else."

The generation of creative work in the arts also taught us much about the role of the artist-teacher and how such teachers should work. We know, for example, that once an artist-teacher is brought into a school the creative imagination will begin to flourish in its life and program of work. One such teacher will infect a whole school; but two working as a team will be better, because reinforcing each other they will stimulate the needed expressive climate of life and work:

First: They will surround the young people with a true climate of freedom in which all will not only *feel free* to say what they think their way, but will *feel obligated* to speak with the most complete integrity and form.

Second: They will sense the need to provide security for unsure or apprehensive youth, to remove fears and build confidence. They will respect the role of improvising the indispensable "first statements," of getting something stated, knowing that this is a step in building confidence and dispersing inferiority.

Third: Being themselves masters of technical competence they will know how to develop it in the children. They will know (1) that technical competence cannot grow thru the memorization of routine tricks, devices, or other formal technics; (2) that technic should be taught only when the child senses a personal need for it and understands its functions; (3) that child needs can be anticipated only by a sensitive teacher who is also a creative artist; (4) that to grow in the capacity to say what one sees with form, one must constantly subject himself to the check-rein of self-discipline. That is the most effective way to encourage in children the "divine discontent" of the master-artists, the feeling of dissatisfaction with any statement that does not measure up to the principles of form.

Fourth: The true artist-teacher knows that he, alone, cannot accomplish these wonders of education. To do these things *the whole staff of the school must believe in the creative way so fully that it provides a total curriculum of rich creative experiences.* In the last forty years many progressive schools discovered helpful and practical reorganizations of the program of work which bring that about.

New Epoch in Education

This is a fair sample of the understanding of the creative process that principals of our best elementary schools should be able to expect of their experienced teachers. I am warned by informed colleagues that few of the graduates of our teachers colleges enter teaching today with such understanding. If this is correct, we shall need to reexamine the life and program of our teacher-education institutions from this approach.

In fact, on many scores, such a foundational reexamination is called for, and will lead, I am convinced, to far-reaching reconstruction. We *are* entering a new epoch in education in which the theory and practice of the *creative* way will have first claim upon us, in the teacher education institutions as well as in the schools. No matter how old or experienced we are in education, the problem of cultivating the creative imagination in the schools will be a novel one, beset with baffling unknowns. I know of no paradox of our times equal to it: while modern man has brought about the present "calculability of abundance" by creative acts, he does not know how it was done. Until he knows more about it he cannot teach his youth how to do it; he can only let nature take its course. He has mastered the psychology of habit, and knows much about the logic of problem-solving and the scientific method of inquiry. But what takes place in the *creative act* is still largely a mystery; *how* problems are recognized and stated, *how* signs are transformed into symbols, and *how* the input-output synthesis produces intelligent behavior—all this is relatively unknown.

Hence, while we do the best we can with our present experience in the arts, let the research-minded ones among us go at the unlocking of the mysteries of the imagination. The first step is to state the consensus of what *is* known—physiologically, psychologically and esthetically—about ways of knowing and imagining, and much technical knowledge is hidden away in the scientific archives. The second step is to discriminate the knowns from the unknowns. The third, the really creative step, is to state the most valid hypotheses which can serve as the experimental basis for the exploration of the unknowns. This much I have sought to do myself in my forthcoming studies of the imagination.

SCIENCE *and Public Understanding*

DAEL WOLFLE

As a setting for this paper, I would like to go back almost 400 years to a rebellion started by a 14-year-old schoolboy. The boy was Francis Bacon; the year, 1575; the setting, Cambridge University. The rebellion turned out to be one of the most important revolutions in the whole history of thought, for the schoolboy Francis Bacon became the first prophet of the scientific age, and to do that he had to overthrow the whole system of scientific thought of the philosophers and learned men of his day.

Let me explain that altho I start almost 400 years ago, I will get up to date very quickly, for after saying a little about the revolution that Francis Bacon started, I want to discuss for a little longer another revolution that some of us ought to start.

Bacon was born in 1561. Henry VIII had been dead only a few years, and his daughter, Queen Elizabeth, occupied the English throne. England was beginning to become a powerful nation, but the Spanish Armada was not destroyed* until Bacon was well along in his twenties. It was an age of exploration. Among Bacon's contemporaries, Henry Hudson explored territory familiar to all of us; Francis Drake explored other parts of the globe; and William Harvey explored the blood stream. Bacon was undoubtedly influenced by these discoveries, but another type of discovery influenced him even more. He was impressed by the invention of the printing press, and saw that the easy production of books would become a powerful influence in educating man and changing his thinking. The invention of the compass made it possible for Hudson, Drake, and others to explore the whole world. The work of smelters and potters and glass makers was producing new materials and products of wide usefulness. Bacon foresaw that such inventions would have a profound influence on the conditions of human life.

Bacon also saw the philosophers and learned men of his day and was not impressed—at least not favorably impressed—by what he saw. Science in Bacon's time was the possession and privilege of a few learned men, philosophers who followed the tradition of Aristotle and Plato. Bacon found their theories sterile. He counted their failure to observe natural phenomena and to conduct experiments a lack so great as to doom their work to everlasting uselessness.

Social Utility of Inventions

Contrasting the social utility of inventions with the sterility of the theory-spinning of philosophers, Bacon started his rebellion. Clearly it was no minor tyranny he sought to overthrow. On the contrary, he set out to be a giant-killer, to overthrow the whole system of scientific thought of the philosophers and to remake the world in order that all men might live fuller, happier, and healthier lives. Prevailing thought before Bacon's time did not conceive of the possibility of a drastic improvement in the condi-

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tions of human life. Bacon did conceive of such an improvement. He foresaw, and was perhaps the first to foresee, that this goal could be achieved by a great scientific revolution. To the grand design of that revolution he devoted his life. The science that Bacon sought to establish was to be grounded in experiment and natural history, was to be productive of new inventions, was to provide the foundation for an expanding industry, and was to serve to better the lot of individual men.

Profound and sweeping as these proposals were, they have been realized. We who live in the age of science and technology see the evidence on every hand. It would be fun to bring Bacon back to life and to serve as his guide while he discovered the changes that have taken place. Imagine his excitement in purchasing shirts that need no ironing, socks that do not wear out, a stove that lights its own fire and extinguishes that fire when the meal is cooked, a shiny box for the kitchen in which food can be kept fresh for long periods, spectacles with a hearing aid concealed in the temple. In the array of available goods, Bacon might be particularly pleased to find the many articles made of stainless steel, for one of the specific projects he proposed was the development of rust-proof steel. He even predicted that stainless steel would find its first use in the kitchen.

It would be fun indeed to show Bacon a house full of gadgets, a big department store, a busy airport, or a modern hospital, but the sight-seeing trip should not stop with such exhibits. For Bacon knew that pure empiricism—experiments of fruit, as he called such practice—was only part of the task ahead, and that more fundamental research—or what he called experiments of light—was also necessary. Bacon believed that as long as one restricted himself to empirical and technological work, inventions could come only one or two at a time, but advances in basic knowledge and understanding of nature's laws could result in whole clusters of useful inventions. It seems to me that this was one of Bacon's greatest insights. The dependence of technology on basic science is now generally recognized. For Bacon to recognize this relationship during the comparative infancy of both experimental science and industry shows how remarkably sound his judgment was.

Bacon would certainly want to see our modern scientific research laboratories. To the prophet who advocated the collection of great storehouses of the factual knowledge of nature it would be an exciting experience to visit the Smithsonian Institution, the Library of Congress, and some of our magnificent zoological and botanical parks. To the prophet who foresaw that the scientific revolution was too great a task for any private individual, and who called upon King James for government support, it would be a revelation to visit the National Science Foundation and the National Institutes of Health and to read an account of the federal appropriations in support of research and development. The philosopher who berated philosophers for spinning elaborate theories without observing the phenomena they were discussing would be an ardent supporter of the close and continuous interplay between experiment and theory that characterizes the work of scientists in our present day universities and in our research laboratories.

Many of the things Bacon advocated have become common practice, many of the things he wanted to see come to pass have come to pass. His role as the first philosopher of the scientific age is completely and permanently established. To my mind, perhaps the best summary of his accomplishment is to say that he took science away from a little coterie of philosophical speculators who realized neither its nature nor its potentialities and gave science to the whole world with instructions for making it the most powerful instrument man has known for improving the conditions of human life.

Social Decisions Required

We have come a long way on the road that Bacon charted. Unquestionably, he would be enthusiastic over the progress that has been made. But he could be complacent, for the very success of science has created a new problem in its relationship to the welfare of society. The new problem is this: science has become so abstract and complex, and is changing so rapidly, that it has become extremely difficult for the nonscientist to understand. At the same time, science has assumed such a fundamentally important role in our industrial and technological society that it

becomes extremely important for the nonscientist to understand its nature and the significant role which it plays in our culture and in our economic life.

Some aspects of this problem are widely recognized, but the basic nature of the problem is not generally understood. As a concrete illustration, we have the case of the atomic bomb. The bomb is a frightening object, and the peril that comes from its destructive force is generally known. The more profound peril, however, is not well recognized. It is the fact that society simply cannot digest the bomb, and in this respect the bomb is symptomatic of the fact that science is gaining greater and greater power, and in so doing is posing more and more urgent problems for society. As scientists gain greater and greater understanding and control of the forces of nature, it becomes of mounting importance for society to make the right decisions concerning the support of science and the control and utilization of scientific developments.

Already we know the nature of some of the developments that will require difficult social decisions. What will society do with the ability to develop power in any amount, anywhere on the globe, free from dependence on water power or fossil fuels? What will society do with the ability to launch a missile capable of destroying a city thousands of miles away? What will we do with the ability to construct a factory that requires no human operators but only maintenance personnel to keep in repair the machines that convert raw materials into finished products? What will we do with the ability to send explorers to the moon?

These questions arise from the work of scientists and engineers, but they affect all mankind, and the answers that are arrived at should result from the thinking of other men, and not of scientists alone.

Popular Attitudes

The intelligent cooperation of scientists and nonscientists in arriving at answers is made difficult by the progress of science itself. For as science progresses, other men find it more and more difficult to appreciate what science is about and to understand the scientists' language, problems, and intentions. As scientists have moved farther and farther from processes and problems that are open to the inspection of other men, they have dealt more and more in abstractions, have developed specialized vocabularies and a technical jargon, and frequently have concluded that their subject matter is too esoteric for general understanding. In truth, it is difficult for the nonscientist to know what modern science is about. When the scientist speaks of megaton bombs, of distances a billion and more light years away, of space that is negatively curved, the nonscientist looks puzzled. Even if he recognizes the individual words, the magnitudes are beyond his comprehension, and he lacks a framework of experience and understanding into which to fit such strange concepts.

The absence of understanding leads to confusion and to a public attitude toward science and scientists that is muddled instead of being clear and coherent. On the one hand, a considerable amount of anti-intellectualism exists. The scientist or scholar is frequently an object of suspicion and mistrust. His loyalty is more likely to be questioned than is that of other men. He is considered strange, unusual, not altogether honest, and sometimes antisocial. The teacher is a "square," and rigorous intellectual scholarship is out of date. These disquieting attitudes show up in many forms and places. On the other hand, however, the public is not opposed to science; it welcomes and enjoys those fruits of science that it can assimilate. There is no serious opposition to radar, television, antibiotics, or electronic computers, and we know that the individual who perfects a cure for cancer will be a public hero. Thus, while the fruits of science and scholarship are honored, the scientist is not. This is what I mean by saying that popular attitudes are muddled.

It is, I think, a truism that a society that does not appreciate the problems and the promise of science, the things it can do and the things it cannot do, cannot derive maximum benefit from the potentialities of science. A society that eagerly grabs the fruits of science but does not accept the scientists who produce those fruits cannot make full use of the scientific talent that exists in its midst. A society that does not understand science cannot make the wisest decisions on how to use the new powers that science gives it.

On this point I would like to quote from an address given by J. Bronowski at the 1955 meeting of the British Association for the Advancement of Science. Bronowski said:

> When a society is penetrated, as ours is, by technical skills and engines, the decisions of state cannot be taken out of the context of science . . .
>
> The fate of a nation may hang on an error of judgment here. Let me give you a slightly mischievous example. In 1945, the British Government published . . . a White Paper on the wartime development of atomic energy. Among the documents in this White Paper is the directive by which Mr. Winston Churchill . . . set up the project to make an atomic bomb. This directive begins with the words: "Altho personally I am quite content with the existing explosives . . ."
>
> This bland phrase is a monument to a nonscientific education. Think what it would have implied in a dictatorship in which, as the example of Germany shows, the dictator is surrounded by specialist advisors who are yes-men, and who are therefore bigoted and ignorant even in their specialty. In a dictatorship, Mr. Churchill's satisfaction with existing explosives would have been the end, not the beginning, of serious research toward an atomic bomb . . . I do not much care for atomic bombs myself, but still less do I care to have them judged in phrases like Mr. Churchill's. In 1941, they might have weighed life and death between this country and Germany; and what brought down the scales was not the wisdom of statesmen, but the democratic tradition which caused Mr. Churchill to waive his own unwisdom.
>
> This example shows us succinctly what voters and statesmen do not know. I have called Mr. Churchill's astonishing phrase a monument to a nonscientific education. For it could have been written only by a man, an intelligent man, who simply does not understand how big a million is. The difference between atomic explosives and ordinary explosives is the difference between the length of a nuclear bomb and a molecular bond; and this is a factor of more than a million. To suppose somehow that, in multiplying the energy of an explosive by a million, you are doing nothing very different from multiplying it by two, or five, or ten—that is simply not to grasp the scale of the world . . .
>
> Here we reach the nub of what we mean by a culture. Of course, we do not want members of Parliament to be atomic physicists or experts in virus diseases . . . Why should they be? They are not literary critics or historians. Yet, without being specialists, they know the difference between Milton and Kipling, and what sentiments each of these minds stand for. They know that Pitt and Napoleon were contemporaries and that, in the nature of things, the Industrial Revolution in England came before and not after the American Civil War. But in the field of science, the voters and those whom they elect have absorbed no such implicit knowledge. They have no framework into which to fit new information, no standards to test it by, and no vocabulary with which to handle it. If I were to say with enough solemnity that the stars must be very young because they are made of neurons and enzymes, no statesman would wink at me . . .[1]

In this quotation and earlier, I have tried to demonstrate the importance to the world of having statesmen and voters with an intelligent and discriminating understanding of science. Let me discuss the steps necessary to attain such understanding. Those steps fall under the two familiar headings of, first, education and, second, public relations.

Education

Education in science needs much improvement. I am not here talking about the education of scientists, but about a more difficult problem —the education of nonscientists. This is not the place to go into details of educational reform, but it is pertinent to point out that there is a shortage of science teachers; that far too many science teachers are inadequately educated in their subject matter; that these conditions are likely to continue so long as prospective teachers can receive higher salaries and enjoy greater prestige in industry; that many science courses are dry, dull, and crowded with inappropriate and sometimes incorrect subject matter; that most college courses are designed almost exclusively for the future scientist; and that at all levels science is too frequently taught as a collection of facts instead of as a method of gaining knowledge. These are serious shortcomings, but I pass over them here in order to point out a more fundamental reform that is a real necessity.

When the traditional curricula of our schools and colleges were established, science was not included because it was not a necessary part of a good general education. For general cultural purposes, students had to master their mother tongue; they had to learn something of history and the arts; they had to acquire a modicum of arithmetic; they needed an introduction to ethics

[1] Jacob Bronowski. "The Educated Man in 1984." *Science* 123: 710-12. April 27, 1956.

and morals and forms of government; and they needed some knowledge of the language and cultural traditions of other peoples. But students did not need science because adults could get along quite satisfactorily without a knowledge of science.

Later, as science came into greater prominence, American schools and colleges offered courses in science, but usually as electives rather than as an integrated part of a general curriculum. Much science is taught, and we have excellent technical schools. If a student wishes, he can go thru college taking science or engineering courses and very little else. On the same campus his classmates with other interests can graduate with practically no science at all. Such specialism results in the nonscientist learning too little science, and the scientist, too little else. In England and the European countries, the separation has been even sharper. Special schools and colleges have been developed for students who want to study science, but these schools are intended for the training of future artisans, engineers, scientists, and technicians. The future lawyers, civil servants, statesmen, and men and women of general education continue to attend schools that follow the classical tradition. Neither in Europe nor in the United States has science become a generally accepted part of a liberal program of education.

The reasons that were valid in keeping science out of the traditional curricula are no longer valid. It is no longer true that most educated people can get along quite well without an understanding of science. It is as important for a Congressman to understand the impact of science on society as to understand the impact of nationalistic strivings on the stability of government. It is as important to understand the language of mathematics as the language of Ancient Rome. It is as important for a citizen to understand the influence of scientific and technological developments on the economy of his country as to understand the historical influences that shaped that country. Science has become an instrument of such power in changing society—whether the change be good or bad—that no nation that pretends to have an educated citizenry can neglect it. To do so is not only to remain ignorant, but also to imperil the whole future of the nation.

Public Information

As a second point of attack, there is a public relations or public information aspect, as well as a formal educational aspect, to the problem of bridging the gulf between scientist and nonscientist. It is important to give a better understanding of science to students now in school; it is also important to give such an understanding to the voters and policy makers of today. This is a huge undertaking, but fortunately much is already being done to inform the public about science. Industry, scientific associations, and universities are engaged in a variety of adult education and public information programs. We have an able group of science writers whose professional competence is devoted to the task of teaching science to the lay public. It is true that too much of the popular information about science deals with discoveries and not with the processes by which they were achieved; too much attention is given to getting an earth satellite into its orbit before the Russians succeed in a similar effort, and not enough attention to the scientific meaning of having an instrumented basketball circling the globe a few hundred miles out in space; too much of science writing deals with black boxes, magic cures, and so-called modern miracles, and too little with a greater understanding of the processes of nature. These disproportions exist, but we know they exist, and scientists, science writers, radio and television producers, and others who contribute to public education can work together to bring about better balance and better general understanding.

Scientists must take the initiative for improving science education, for making science part of liberal education, and for giving the public a better understanding of science. They see the problem most clearly, and they have taken some of the steps that led to the present gulf of misunderstanding. They must take the first steps to close that gulf.

It seems to me a matter of utmost importance that the gulf be closed, that we secure a better general understanding of science and a better integration of science into the culture of our time. It seems necessary, first, because a growing gulf of lack of understanding endangers the continued support of scientific work. Second, it seems necessary because science and engineering have be-

come and must continue to be a fundamental support of the way of life and the type of society we wish to continue. The future of science depends largely upon public understanding and acceptance; the welfare of the world depends largely upon the future of science and the wisdom with which society handles the problems that are raised by scientific and engineering developments.

Perhaps we need another revolution in thought, a revolution led by another enthusiastic and devoted rebel who will make it his life's work to bring about the better integration of science into the complex web of modern life and culture.

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. . . . A Critical Time

"Scientists," Dael Wolfle says in his article, "must take the initiative . . . for giving the public a better understanding of science." The council of the American Association for the Advancement of Science, aware of this responsibility, established in 1955 an Interim Committee on the Social Aspects of Science. At the council's meeting this winter, the Committee submitted an interim report which has drawn widespread attention. A brief excerpt from this report follows here.

This appears to be a critical time for review of the general state of science and its relation to society. We are now in the midst of a new and unprecedented scientific revolution which promises to bring about profound changes in the condition of human life. The forces and processes now coming under human control are beginning to match in size and intensity those of nature itself, and our total environment is now subject to human influence. . . .

The determination that scientific knowledge is to be used for human good or for purposes of destruction is in the control of social agencies. For such decisions, these agencies and ultimately the people themselves must be aware of the facts and the probable consequences of action. Here scientists can play a decisive role. . . .

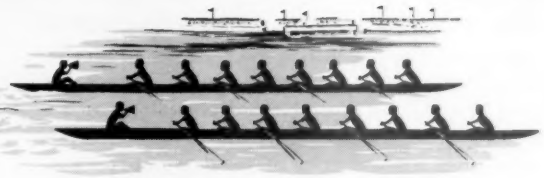
There are indications that the public interest in science is not commensurate with the important role of science in society.

1) Shortage of scientific personnel: We face a major crisis with respect to present and future shortages of scientific personnel. In effect, this means that the social environment in the United States does not elicit a maximum interest in science on the part of those individuals who have the capability of doing scientific work, or that our social organization does not permit them to receive the necessary training. . . .

2) Attitudes toward scientific work: To some degree the foregoing difficulties reflect a broader problem—that is, a traditional disregard for abstract thinking. . . . This problem, particularly as it relates to a lack of interest in scientific careers, has attracted considerable attention of late. Recent surveys indicate that the general attitude exemplified by popular epithets such as "egg-heads" and "longhairs" is well rooted in the opinions of young people.

3) Science in the public press and other media: By all standards, science receives an unduly small share of the budget of newspaper space or broadcasting time. . . . The immediate reasons for this state of affairs are manifold. It is clear, however, that the situation reflects a rather low level of interest in science on the part of the public, or, more probably, of those who attempt to judge the public mind for purposes of directing the media of information.

COMPETITION and COOPERATION in OUR SOCIETY



ROBERT M. ISENBERG

It is a common belief that we live in a highly competitive society. Each of us has certain physical and emotional needs and desires which we struggle to satisfy. In our efforts we are in continuous contact with others similarly going about the business of satisfying their own particular needs. We are forced to meet the reality that their efforts and desires place limitations upon us. Obstacles are put in our path. It seems that competition is a dominant force in our life—in our society. And this belief is generally accepted.

Those of us who are parents or teachers—or both—substantially influence the growth and development of the children with whom we are in daily contact. This is our responsibility. Our guidance should help each of these children relate the limited world he knows to the vast universe of experiences he has not yet had time to explore. It should develop in him sufficient strength that he will meet each new experience with confidence and anticipation and with maximum possible adequacy.

If it is true that competition really is a dominant force in our society, we need somehow to provide for it in the long-term developmental process we call education. There is much that we know about both competition and learning. And more is being discovered. The purpose here is to stir together a few observations and a few bits of what is known with the hope that such a mixture might actually suggest ways in which our adult performance might better serve the developmental needs of the children with whom we work.

Robert M. Isenberg is Assistant Director of the Division of Rural Service, NEA.

The Child's Ability To Compete

Competition in the extreme suggests the "survival of the fittest" or a kind of "dog-eat-dog" philosophy. In this sense it has application for every living thing. Protective coloration, super senses of vision, hearing, and smell, or other "built-in" characteristics help most creatures compete for survival. Man is not so fortunate. Except for a number of simple muscular reflexes and the capacity for certain emotions, there is no substantial evidence to indicate that our species has any specific instincts. The child is born with potentialities for showing all types of behavior. But these he must learn. If he is to survive in a competitive society, he needs to learn how to compete. He is poorly prepared at birth.

At the same time, however, the child displays a remarkable ability to cooperate. At birth he is completely dependent upon his mother or upon the mother-substitutes our technology has devised. His complete survival, not unlike certain other species, demands cooperative assistance and he is willing to give all he is capable of providing. He is thrown by necessity into a social situation, and from this time on his life consists of one social situation after another. Each may leave an imprint upon him. The kind of relations he establishes with his mother and later with other family members during his early formative period determines to a large extent the way he will respond to various situations in later years.

One of the almost universal reactions of every individual is his need for companionship and his desire for response from others. The child's experiences in the family with his parents and brothers and sisters make him accustomed to having people around him; he has no opportu-

nity to know anything different. At first by necessity and later thru habit he learns to rely upon others for help. He learns how to assist them. He develops a kind of gregarious nature strong enough that, if he were cut off from all companionship, he would suffer more from loneliness than from any of the physical or economic deprivations that living alone would impose. The influences of family and community give strength to this desire for mutual assistance that is cooperation.

This is not to say that competition does not also enter into the learning experiences of the child. Many situations which are competitive arise. But almost without exception these are met with social disapproval. The arrival of a new brother or sister, for example, places previously unknown demands on parental attention. This kind of competition evokes attention-getting behavior, the desire (sometimes accompanied by overt acts) for harm to fall upon the new arrival, or, if these are not possible or successful, emotional disturbance. Competition between children over the use of a particular toy often leads to aggressive behavior and results in similar disapproval. The child soon learns that cooperative acts such as "sharing" or "being a helper" are met with praise and approval. Grabbing, fighting, and other competitive reactions are frowned upon by the adults in his life whom he is most anxious to please.

Children develop their attitudes largely from those which their parents express during this formative period. Altho these attitudes can later be influenced or changed, once they have been acquired there is considerable resistance to change. It seems most clear, then, that the child is not only poorly equipped by nature to compete, but also his early experiences as a family member encourage him to be a cooperator and discourage his efforts to be otherwise.

Competition as Motivation

After a few brief years of shelter within the family, the child in our American society is quickly thrust into the more formalized learning situations of the school. Here he finds a well-defined set of social expectations, altho he has little basis for understanding them. His previous experiences as a family member, with play groups, in Sunday school, in nursery school, or elsewhere may have prepared him well or poorly for what is expected of him. But regardless of his preparation, he is in. And school will be one of the most important activities in his life until he reaches adulthood. This is a period during which he is confronted with one organized learning situation after another—all directed towards equipping him with much of the knowledge, the skills, and the attitudes which he will need in order to be a contributing member of an adult society.

Teachers are constantly reminded of the importance of motivation in learning. Their job is one of trying not only to understand the motives of children but also to utilize them in guiding learning activities in the desired directions. Any class with which a teacher works emphasizes the great differences among individual members—in interests, experiences, and capacities to learn. It is a matter of rather delicate balance to capitalize on the likenesses among children in order to develop desirable group relationships and a common concern for democratic values and upon their differences in order to develop individual talents and special interests. Accomplishment depends upon appropriate motivation.

Competition is often considered as a powerful and effective motivating force. Teachers and school systems have long used competition as a basis for the rewards which the school can give. Gold stars, school marks, honor rolls, upper quartiles, rank orders, valedictorians, promotion, and so on have been held up as a means of getting children to extend themselves. They have been established as goals to challenge pupils to greater efforts.

In recent years a number of careful investigations have added to our understanding of motivation and how children's school activities can be planned to achieve maximum benefits. These studies raise serious questions about the values of competition as a motivating device. They emphasize that forcing children to compete may have negative consequences for the majority of the school group and that these often more than offset any benefits which are obtained. Competition without rules is inconceivable, and one of the rules of true competition is that the competitors shall be evenly matched. Much of our school

competition has been far from evenly matched. For the child who has little chance to win, such competition becomes a real threat. He is doomed to fail (or believes he is) and will probably either openly resist or merely go thru the motions.

Competition in school tasks—for grades, the honor roll, or some other school-planned bribe for achievement—puts emphasis upon winning. The prizes usually have little value in themselves; their value is in what they stand for—prestige, recognition, success, praise, attention, or the like. But for the keenest competitors, the reward often becomes the end toward which they compete. Parents, too, frequently encourage their children to strive for these artificial goals. Their honest desire for their child's achievement runs a risk of being misplaced. Having the highest aggregate average, getting the top spot in the student popularity poll, or whatever else is established as the reward of the competition, may become so important to the competitors that the real purpose of the competition is actually secondary. Winning is their single objective.

Every child needs to experience frequent success. Whether he is learning a new game in his kindergarten, learning how to substitute abstract symbols for unknown numbers in algebra, or trying to understand the social, economic, and political factors which led to the unification of Italy in his study of history, he needs to feel that his learning task is a challenge but not one of insurmountable difficulty. Success increases the attractiveness of otherwise neutral activities. Frequent failure or anticipated failure may make an otherwise acceptable task distasteful. Some experience of failure to reach desired goals is probably inevitable for every child. And occasional failures and disappointments can have positive benefits when the teacher helps the child understand why his efforts were not successful and how the result might have been different. But carefully collected evidence suggests that the best preparation for accepting failure is an adequate reserve of success experiences.

The preceding discussion does not imply that competition and rewards do not influence learning. Their influence as a means of stimulating a few children in any class who have a chance (or think they do) to exert superior competitive effort can hardly be questioned. The major problem which exists for the parent, or the teacher, or the school system, has to do with competition's by-products. When there is competition, what happens to those who fail to get the reward? When there are many contestants but only one prize, what happens to the losers? Their problems must be faced along with the success accorded the winner. What is the price of their disappointment? How does it compare with what the gain was for the winner? Studies of motivation, of child behavior, and of successful learning experiences indicate that these are real issues.

Competition in Economic Activity

One of the areas of social activity generally regarded as a prime example of competitive endeavor is our business and industrial structure—our system of free enterprise. In some respects our economic system is highly competitive; in most respects it is not. It is doubtful that a perfectly competitive economy has ever existed in any society. There was a time when competition in a free market was much more the case in this country than it is today. Of necessity we gradually have replaced the determination of prices by "a willing buyer and a willing seller" which characterizes a free market with a complex but very tangible web of financial and organizational controls. And there is no evidence that this direction of change will be substantially reversed.

Competition in economic activity, just as in any kind of competitive contest, demands rules. Even if our market mechanism were free, we would still need rules to prevent fraud, exploitation, compulsion, and collusion. Actually, it is free enough that we have found need for antitrust laws, the outlawing of price discrimination, pure food and drug laws, patents and copyrights, better business bureaus, and other kinds of regulations. These rules restrict any possibility of a "perfectly" competitive market but are essential to keeping competition "fair."

The limitations of competitive rules are generally obvious and are accepted as necessary and desirable. They provide a framework within which our economic enterprises can compete in orderly fashion. To a large extent they do, altho not nearly to the extent that is generally supposed. The few organizational controls which have been imposed—the rules of the game—are intertwined with many other much more subtle limitations to free competition.

In any competitive economic system, for example, it should be possible for new competitors to enter the field in competition with already established firms. Economists and business organizations accept this theory. But actual circumstances in our American economic system are not quite as simple as the theory. In certain of our larger industries, the enormous initial capital investment necessary virtually prohibits newcomers from entering an established field. Some of these large concerns also maintain, sometimes informally, strategic control over the supply of critical materials, the technics or processes required, and often even the personnel competent to perform the necessary operations. A number of legal obstacles—licenses or franchises—play a part. Modern mass advertising tends to create dealer and consumer preferences which discourage new competitors. Recently in certain industries this has even forced the weaker of already established competitors to combine in order to delay annihilation. When these "artificial preferences" are reenforced by resale price maintenance systems, exclusive-dealer contracts, price decline guarantees, and similar devices, the barriers to new competition are most formidable.

A quarter century of depression followed by military effort or preparedness has seen the creation of other economic props deemed essential to the maintenance of economic stability—guaranteed minimum wage laws, unemployment insurance, price supports, soil bank, tax immunity, and the like. Rationing and other materials allocations, price controls, et cetera, have operated for a time but have been revoked. Protective tariffs, which date back to our early years as a nation, continue to be used to safeguard our industry and our labor from the underbidding of foreign producers.

Each of the kinds of controls identified above, both formal and informal, are kinds of controls which are not compatible with free competition. But they are the realities of our times. They mean, in essence, that we have an economic system which in many respects has little similarity to the "competitive free enterprise system" which we frequently hold up as our "ideal pattern."

Most business establishments in our modern complex world are specialists of a sort. Each does a particular kind of job. Each depends upon a number of other businesses to supply the various materials and equipment it needs. The automobile manufacturer buys his steel and other materials which he fabricates. He contracts with other manufacturers for the tires and many of the specific parts which go into the assembled mobile monster. Many of these other manufacturers sub-contract with other enterprises who may also sub-contract. The web of interdependence spreads so widely it becomes difficult to trace. Economic activity today is a complex series of cooperative relationships. This is as it is.

Close inspection will quickly demonstrate that whatever the function—manufacturing, processing, construction, distribution—every economic enterprise is actually a highly integrated system of interdependent activities. Watch the movement of the automobile down an assembly line. Parts move in endless fashion from various buildings and from all directions. It is a marvel to see how the yellow fender arrives at just the right time to be secured to the chassis with the yellow wheels; the next one is also just right. This is not accident. It has been carefully planned. Mass production is cooperation in action.

Some Concluding Observations

I well remember my initial shock to discover that the milkman on his early morning rounds stopped to make deliveries at farm houses. That farmers would specialize to an extent of not even keeping a cow for their own milk had never occurred to me. This was a simple incident, but it is symbolic of the tremendous interdependence of people everywhere. The welfare and safety of each of us are influenced by thousands of people every day. Our own contributions, small as they may be, spread out to touch the lives of thousands more. The extent of world-wide interdependence is probably sufficiently obvious that it may be enough merely to say that everything we do is dependent upon the cooperation and continued goodwill of others. Our interdependent world turns on an axis of cooperation. It requires a faith and trust in other people—people we will never know and will never identify.

Children begin totally dependent and from birth continuously struggle for independence. But they never completely outgrow their dependency needs. They are members of groups—the family, the play group, the school class, the

gang, and so on. They need to belong, to be recognized, to be accepted. The child who fails to gain the acceptance of other children or who seems not to feel a need for other children is not a healthy child in our society. We consciously work to reduce social distance between individuals. We consider the group as more than an aggregation of individuals. Our personal pronoun is plural.

Parents and teachers are faced with the job of trying to keep a balance in children's learning tasks between sufficient challenge and frustrating difficulty. Children need to experience success regularly. Putting emphasis upon success (or failure) rather than upon rewards (or punishment) is putting emphasis upon what it is the learner is trying to accomplish. This is where the emphasis belongs, not upon "what there is in it" for him.

Motivation can never be considered as something which happens at isolated moments, at the point when the teacher begins the lesson or the unit. Children need to understand why they should do what they are expected to do and to enjoy achievement. In an increasing number of classrooms, skillful teachers are somehow able to find materials and guide children's exploration of them in such a way that learning is challenging and exciting. Every child finds some satisfaction in his achievement and is given help in planning further related work. In other classrooms children are not so fortunate. They seem unaware of the purposes, either immediate or distant, for which they are performing the assigned tasks.

Teachers frequently must organize their classes into groups for effective teaching. Skillful teachers use a variety of ways of grouping children. Ability groups are used sometimes for some activities; interest groups or social groups for others. Various combinations help pupils feel secure in the classrooms; rigid divisions contribute to insecurity. "Bluebirds" know that they are bluebirds and "crows" know that they are crows. Insecurity can never prepare the child for the level of cooperative activity society will demand of him.

Parents and teachers exert a tremendous influence upon the children who look to them for guidance. These children need to learn how to compete and how to cooperate. As adults responsible for their development, we must be discriminating in our use of competition. Competition between individuals and groups can work advantageously when the individuals or groups are approximately equal in their ability to compete—when the odds are even. But where wide variations of ability to learn occur, teachers should recognize the challenge to develop a kind of "beat your own record" competition.

Children need to learn that they will never be able to do all things. Some things they may learn to do well; others perhaps not at all. This is not failure. It is completely in harmony with the way society is. In those areas where we can contribute we make our contributions. We give of ourselves and are rewarded by the satisfaction of doing this well. For those things we need that we are unable to provide for ourselves, we depend upon the contributions of others. This interdependence exists in our family, our school, our community, and in our society. Our relationships with others depend primarily upon our ability to cooperate.

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AT THE ANNUAL MEETING

About 450 of the 3000 conference participants worked in this clinic group on reading. In this and several other extra-large sections, the group broke into small round tables of about ten each. Other discussion groups worked in small rooms.

The Department's Yearbook Committee, shown here, met for two days just prior to the Annual Meeting. Left to right: Victor Hornbostel, Assistant Director of the NEA Research Division, who is working on the project with the Committee; Gertrude Howard, Inglewood, California; Raymond Ebaugh, Royal Oak, Michigan, *chairman;* Luise Reszke, Cincinnati, Ohio; and Lawson Brown, Tuscaloosa, Alabama.

The Department's Executive Committee which met just following the conference. Standing, left to right: W. George Hayward, East Orange, New Jersey; Basil Rohrer, Evansville, Indiana; R. Melvin James, Portales, New Mexico; William F. Buboltz, Milwaukee, Wisconsin; Ralph S. Eudaily, Missoula, Montana; and Ray W. Smith, Buffalo, New York. All are members-at-large. Seated, left to right: Robert N. Chenault, Nashville, Tennessee, President-elect; Dorothy Neubauer, Assistant Executive Secretary and Editor; Mathilda A. Gilles, Salem, Oregon, President; Bernice

EDUCATION *for a World in Transition*

JOHN H. FURBAY

John H. Furbay is Director of Air World Education, Trans World Airlines, New York City. This article is a summary of a talk given by him at the Department's Annual Meeting, Cincinnati, Ohio, March 1957.

Some writers have said that the airplane is going to change civilization and culture as radically as did the Industrial Revolution. People who live in the transition years between one epoch and another almost never realize that one period is ending and another beginning. Thus the man-in-the-street does not yet comprehend what the new air world will do to him and for him.

It is an historical fact that patterns of culture follow routes of trade. Much of the early literature, music, art, and great works of architecture arose where trade and transportation were best developed—around the Mediterranean. Here evolved the great culture of the Egyptians, later of the Greeks, then of the Romans. For several thousand years this culture didn't get far away from the Mediterranean. Why? Because of transportation. Aside from carrying things on one's back, the only means of travel in those days was on water. People could sail from one side of the Mediterranean to the other and exchange both goods and ideas, but to penetrate inland regions was far more difficult.

As a result of the interchange within the Mediterranean area, some of the earliest universities and libraries sprang up in North Africa. Greece and Rome became great cultural centers. But during all these great developments, most of the ancestors of those of us who come from North European stock were still uncivilized; they hadn't yet come out of the caves. Isolated from the culture which was thriving around the Mediterranean, they were at least four thousand years behind. Great works of poetry, music, art, literature—all of these things were by-passing them. As the culture of the world revolved around the centers of transportation, Northern Europeans were left out of the stream of civilization.

Roads and Culture

When the civilizations of the Egyptians and the Greeks fell into the hands of the Romans, who were more aggressive, there opened a new epic in man's history. The Romans built roads, good stone roads, so solid that you can still ride over some of them which were built nearly two thousand years ago. They extended their roads to form a network ultimately opening up the uncivilized, isolated areas of North Europe and the British Isles, giving these peoples their first direct contact with the civilization of the Mediterranean. They carried with them Roman political theories, language and philosophy, and the Christian religion. Thru that genius for organization for which they are famous, the Romans planted thruout Europe the civilization and culture of the Mediterranean which was later to be carried by improved means of sea transportation to America.

Up to that time and for many more centuries, the world was limited by land and water transportation. Now that civilization has come to the era in which man has left the earth and its barriers and has taken to the air, new methods have become necessary for both peace and war. We used to think that a nation which controlled the seas could control the world. We used to think that mountains could stop armies, but now we have seen men, tanks, guns and ammunition, whole hospital units—everything necessary to carry out a campaign—delivered right over any bottleneck of the seas, mountains, deserts, and Maginot lines. We have had to revise the tactics of fighting in an air world where man is no longer earthbound. Even a seaport is no longer necessary for a jumping-off place, since we can take off by air for any part of the world from such inland places as Kansas City or Minneapolis.

The airplane is destined to bring about shifts in population. There will be new cities because of the new transportation routes. I was in one a few weeks ago—Gander, Newfoundland—right out in the wilderness where there was nothing at all before airplanes opened it up.

New Markets

Aerial transportation will not do away with railroads, but will probably enhance their business as long as everything must arrive at the airports by surface transportation. In addition, the airplane is opening vast new markets which will mean more business for all forms of transportation. I have seen towns in South America without a highway or railroad which were for centuries totally isolated. Now airplanes are dropping right into those cities, bringing them in touch with every other city in South America and with the world. I have seen planes bring in loads of cement for new buildings, shipments of American-made merchandise for the local stores, medicines for the ill. Planes now transport all sorts of things over the world to places where once we could not travel.

Cities which within the next few years have not developed good airport landing facilities for this new world of aerial transportation are going to be on their way out as much as were the cities a generation ago which failed to provide themselves with good railroad facilities.

A Changing Concept

This air world is bringing a change in man's ideas of geography. We were taught that the earth is round. Yet most of our maps tell us the earth is flat. It is an unfortunate contradiction of ideas. When we entered the last war, the Air Force found that one of its biggest jobs was to teach global geography, the concept of our earth as a globe. We had learned too much geography from flat maps that can never be wholly accurate. We were too accustomed to the Mercator projection. It is true that at the equator the Mercator projection is completely accurate, but the farther north and the farther south one goes, the more inaccurate this kind of map becomes. Mercator's projection makes Greenland and Iceland appear many times their actual size. Look at such a map, then look at a globe, and you will see these disproportions. The newer polar projection maps are in many ways better, but we need to study geography much more from globes.

The air age gives us many new concepts of direction. If we are going to Europe from Kansas City, the shortest way is not to New York, then east across the ocean, as travel by surface transportation has always implied. We leave Kansas City in a northeast direction and proceed to Paris, leaving the United States at either Chicago or Detroit. This is a different concept of direction and space from that used by railroads and ships. Suppose we are flying from Kansas City to China. Do we take a plane to California continuing on via Honolulu to China? No, we go northward from Kansas City to China, taking off from Chicago or Minneapolis. These are the jumping-off places for China and the Orient now, and the routes go north by northwest thru Alaska.

An Important Direction

North is destined to be an important direction in this air age. The reason is this: in the northern hemisphere lie the major populations of the world—the Orient and Russia, the Middle East, Europe, and North America. If you connect the United States directly by air with any of these other areas of population, whether Paris, Cairo, Moscow, or Shanghai, you find that the routes go northward. It should also be pointed out that if we fight another war it will likely be an aerial war fought thru the arctic zone, right over the top of the world. Peacetime trade and passenger traffic are now going far to the north over the Atlantic and Pacific oceans, skirting the Arctic Circle. As a result, new population centers are springing up along those northern air routes. Perhaps if Horace Greely were alive, he would want to revise his, "Go West, young man," to match the new air age, advising, "Go North, young man, go North."

There are other respects in which we are changing our ideas of geography. The world has shrunk in size and distance. During a two-week vacation we once could get no farther than a few hundred miles from home, but today we can go around the world in that length of time and spend eleven days of it fishing in as many differ-

ent countries if we like. Now we can have breakfast in Chicago, afternoon tea in Ireland, and dinner in Paris—all the same day. That is quite a different kind of world from father's and grandfather's. And as the world shrinks in distance, it *expands* the horizons for each of us, since we can go so much farther in a given length of time.

In Chicago, recently, I met a business man who had just flown in from Paris. He said that in less than a month he had made three trips to Paris. In setting up branches of his business all over Europe, he maintains one office in Chicago and another in Paris and commutes back and forth. He is one of many who do the same thing. His world has suddenly expanded and he can carry on business in what were once considered faraway places. This far-reaching expansion requires a whole new concept of business—the global concept.

Task of Preparation

The airplane may be bringing together the people of the world faster than they are ready for it. We have a big task to prepare the minds of people for living and doing business in one world. We are still thinking too much in the horse-and-buggy days.

We must get acquainted with our new global neighbors. If the farthest is less than forty hours away by air, we can't call them "foreigners" any more. The whole concept of other nationalities being alien to us has to go. And if we are going to get along with these peoples as *our neighbors*, we are going to have to know who they are and what they are like. Let's take a look at them.

Our World Neighbors

What are our world neighbors like racially? When we start traveling, we are amazed to find out that the civilization in which the white man is god simply doesn't hold in most of the world. To those who believe the white man is the most important creature on earth and that he runs this world, it is a shock to discover that the white race is only a minority race, and a very small minority at that; that over three-fourths of the world's population is colored, mostly brown (and there is a no yellow or red race as these are also brown.) Both the white race and the Negro race are minority groups, and if our thinking on race problems hasn't progressed beyond these groups, we have missed most of the world's population.

Whether we like it or not, we are going to have to change our notions of the superiority of the white race. One finds out if he travels much that there are smart people among all shades of skin. Those people who carried on the civilization of the world for five thousand years did not have Nordic white skins, yet they gave us all the seeds of the culture in which we pride ourselves today. While many white people still look down on all colored peoples as inferior, the reverse is also a fact little known to most of us. Many of the colored races definitely look down on us as being inferior, saying: "These white people are only babes in the woods of culture. They only got civilized day before yesterday. We had culture long before they crawled out of their caves." This is, of course, a truth we haven't talked much about.

This prejudice against non-whites very definitely requires us to reorient ourselves, particularly in our relations with the brown peoples. Our ideas of colored peoples are pretty much limited to Negroes. The boys in the service had a difficult time while abroad trying to figure out who was white and who wasn't. They finally decided on a way to determine this. They got a brown paper bag and hung it by the door, and then had an MP stand guard by it. "Look at each arriving guest and if his skin is as light or lighter than the brown paper bag, let him in—he is a white man. But if his skin is as dark or darker, keep him out—he is *not* a white man!"

Mental Adjustment

In developing our civilization, we have lived in comparative isolation and haven't realized what the rest of the world is like. And now that the world is at our doorstep, we are going to have to do considerable mental adjusting, and in so doing many prejudices will have to go. Prejudice is taught; it is not born. A white boy who had lived in Africa and the Near East as a child and had known very few white playmates, was returning to the United States to go to school. He met his cousin for the first time when he arrived in New York, and his first observation was, "My gosh, Pop, she's *white*." He had a child's point of

view. He had never heard any talk about white people being superior. He had played with the brown children all his life and, to him, they were all just kids, people with whom he had lots of fun. Perhaps that is the kind of concept we adults are going to have to develop; that we are not white or brown or black, but that we are all *people*—the human race.

We are also going to have to revise our notions of religion. Brought up in a predominantly Christian country where it is often difficult for the various branches of the same religion to get along together, we find it even more difficult to accept the many non-Christian religious philosophies which the majority of the world still follow. But those of us who have lived with peoples who believe in Mohammedanism, Confucianism, or Buddhism, find that their religions actually serve them well. We are all talking about the same God, whether we call Him Allah or something else; and who are we to say that theirs isn't a good religion *for them?* On only one thing can we be dogmatic: that *any* religion is better than *no* religion.

We are going to have to get used to neighbors not only with different colored skins and with different religions, but neighbors speaking different languages. We are a one-language country. American travelers are embarrased on finding that so many other peoples speak several languages. We are probably the only major country in the world whose educated class speaks only one language—their mother tongue. This is a real problem for airlines and other business firms who are trying to staff their offices in several countries. Where are they going to find American employees who can speak several languages? A business representative can't say to a prospective customer, "If you only knew English, I have something good I could sell you." We must learn other languages if we are going to have a place of world leadership, commercial or political.

Now what about the tourists? It is time we began to prepare them to travel intelligently. Only when they go to another country aware that the people of that country may have developed some things better than we have can they profit by their contacts. It may be music, art, poetry, philosophy, or a sense of humor. Before we travel abroad, let's learn to look for things others have done better than we have. Then we shall be prepared to travel and to make friends.

Where airplanes have dropped missiles of destruction, they can now bring together peoples who wish to be neighbors. It is the boundaries of our minds that are keeping the world apart. Airplanes can transport people; but the real job is going to be to break down the barriers in the thinking of the people who travel, and to build a world of friendship, understanding, and appreciation.

Excerpts From Report of Resolutions Committee

Gifted Children

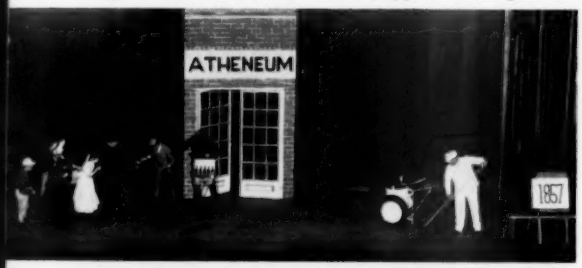
The Department of Elementary School Principals, NEA, has long sought and will continue to seek school programs aimed at helping gifted children reach their full capacities. We remind both the public and ourselves that extreme concern for the intellectual growth of the gifted should not cause us to overlook planning for their emotional and social development. Education of the gifted is part of the larger problem of identifying and guiding the unique qualities of every child. We welcome opportunities for working with the public in improving the quality of the learning experiences made available to all elementary school pupils.

Merit Rating

The Department of Elementary School Principals, NEA, believes that evaluation for the improvement of teaching is an obligation of school personnel and requires professional preparation and competence. Evaluation is necessary in selective recruitment, appointment to teaching positions, determination of tenure, and the continued development of professional skills. There is at this time, however, insufficient evidence

A group gathered around the piano for some singing during the social hour for exhibitors. About 100 firms displayed their materials during the Annual Meeting.

A scene from the pageant, *The First Hundred Years*, especially written and produced for the Annual Meeting by Merrill Van Pelt, Supervisor of Instrumental Music, Cincinnati, Ohio. The time is the second world war when nylons were hard to come by—even for ladies who gave concrete evidence of their need to the storekeeper. At one side, a group of citizens (the classroom teacher is standing at the back of the table) juggle ration quotas.



The pageant, which celebrated the Centennial of the National Education Association, had this as one of its opening scenes. At the Philadelphia Atheneum one hot August day in 1857, forty-one men and two ladies gathered to form the first national organization of teachers. The two gentlemen at the left, impeccably attired in the clothing of the day, are transacting a little business with a street vendor before entering the meeting. At the left is Father Time, narrator for the pageant.

that merit rating of teachers for determination of salaries will contribute significantly to the development of a competent staff. Therefore, the Department cannot recommend its use until better methods of rating are developed.

We strongly urge continued research and experimentation to develop effective uses of evaluation for the improvement of professional competence. We further recommend that principals and their staffs continue to work cooperatively in their efforts to evaluate and to improve the instructional program.

Professional Preparation

Today's elementary school principal needs truly professional preparation for effective administration of a flexible, effective learning program, a well-conceived program of school-community relationships, and for skillful and creative leadership.

The Department of Elementary School Principals, NEA, has been stimulating state and local efforts toward this objective thru its Professional Standards Program. We urge continued widespread and intensive effort on the part of state and local professional associations of administrators, state education departments, and graduate professional schools of education, directed toward the development of higher standards of certification, selection, internship or other field experiences, and teaching experience in the elementary school.

We believe that minimum preparation for the principalship requires one year of graduate study and recent surveys reveal the desirability of two or more years of graduate preparation.

Professional Recognition

The Department of Elementary School Principals, NEA, commends state boards of education for their cooperation with local boards and school administrators in setting up certification and accrediting programs which increasingly assure a qualified elementary school principal for every elementary school.

We further commend local boards of education and superintendents who encourage the professional leadership of the principal by releasing

him from regular classroom teaching assignments and by providing him with secretarial help and adequate facilities.

Professional Salaries

The Department of Elementary School Principals, NEA, is gratified with the progress being made in establishing standards of professional competence among elementary school principals. To maintain this progress toward high professional competence requires the development of professional salary schedules. We approve the trend toward equalizing the salary schedules of all principals with similar preparation, experience, and responsibilities.

We do not approve the practice of extending the principal's year of service beyond the regular school year without providing commensurate pay.

Federal Aid to Education

The shortage of classrooms still deprives hundreds of thousands of children of their rightful educational opportunities, despite unprecedented state and local efforts to meet school building needs. For this reason, the Department of Elementary School Principals, NEA, urges the 85th Congress to enact an emergency program of school building construction as recommended by the White House Conference on Education and by leaders of the two major political parties.

Children are the nation's most important asset. We deplore the situation where children are deprived of adequate educational opportunities because of indifference and alleged economies on the part of the federal government.

The Department is of the firm opinion that increased federal participation in the financing of public education can and should be treated apart from the important, but separate, problem of desegregation in public education.

Tax Equity for Teachers

For many years, school systems have been developing personnel policies which encourage, and often require, classroom teachers and principals to engage in professional development activities designed to maintain and improve their professional competence. Many of these activities entail expense for professional texts, travel, housing, and other items. The United States Internal Revenue Service has ruled that teachers may deduct from federal income taxes the cost of summer school expenses, but only when attendance is necessary to renew a standard certificate or is made a condition of continued employment. The Department of Elementary School Principals, NEA, considers this ruling to be unnecessarily restrictive. The expense of maintaining and upgrading professional competence is a legitimate business expense, comparable to expenses incurred by practitioners of other professions, and we respectfully urge the Congress of the United States to amend the Internal Revenue Code so that income tax laws will facilitate, not impede, the professional growth of teachers.

Proposed Expanded Program (NEA)

The Department of Elementary School Principals, NEA, commends the National Education Association for developing plans for an expanded program of professional service and leadership. This program (called PEP or the Proposed Expanded Program) was initiated as a result of widespread demand that the national program be strengthened so as to more effectively meet the complex problems confronting education today. The proposed plan was outlined and approved for further action by 350 circle groups of delegates at the Portland Convention in the summer of 1956. When final action is taken at Philadelphia in July 1957, the delegates will consider raising the annual dues to $10.00 so that PEP can become operative in the school year 1957-58.

The Department recognizes that the proposed program will require personal sacrifice and enthusiasm by all members of the teaching profession. At the same time we realize that current conditions and the future status of the profession demand united and determined action. The Department calls upon all elementary school principals to support the NEA's courageous plans to work diligently for the NEA membership necessary to undergird PEP in the school year 1957-58.

What They Said . . .

A Sure Direction

Education in our country is not a drifting derelict. It bears a precious cargo; it has powerful engines and a steady compass.

Of problems we do indeed have an ample supply—deficits, double sessions, delinquency, discipline, district reorganization—the list is long enough in all conscience. But the state of our school system is inherently strong. It moves ahead with a sure sense of direction and destiny. Its assets, visible and invisible, are seldom appraised at full value, even by its friends. The schools are not staggering along from one crisis to another. They face the great opportunities of the future with confidence that stems from very great past achievements and equally great current resources.

William G. Carr, Executive Secretary
National Education Association

Good Citizenship

Good citizenship is behavior toward others that is consistent with a good framework of social values. It is much more than an extension of good interpersonal relationships; it includes understandings and skills with respect to the uses and formation of social structures of all kinds; the nature of public decision-making at all levels; solid concepts concerning the nature and uses of governmental power, public justice, a government of laws, the nature of cultures, and skill in the analysis of cultural differences.

The most significant test of good citizenship is not conformity, but rather the ability to vary social forms to meet new needs, within a good value structure. Good citizens are both self-directed and other-directed. The basic attitude of the good citizen is one of answerableness to others for his social behavior.

Arthur W. Foshay, Director
Bureau of Education Research
Ohio State University

Translating the Lingo

I am profoundly concerned that we all understand better how to hand on to the coming generation the knowledge and values distilled from the best of the past and present. But what a job of analysis and synthesis that is! . . . You will stimulate working together for better schools as you clarify what schools are for. That clarification will improve as you try it out on school boards and PTA's and the children themselves. That very process turns it from a teachers' college lingo to a shared and understood experience. No teacher ever told me the theory upon which I was being taught.

Charles P. Taft, Mayor
Cincinnati, Ohio

Intercultural Understanding

The meaning of intercultural understanding is clearly complex in nature. It is more than relatively simple comprehension of the elements of a diverse culture. It involves step by step analysis of many factors. However, to assume or to leave this as an intellectual process is to do only part of the job. Even the "understanding" of one's self is incomplete until one can act upon it in day-by-day living. To do this means a reconciliation between intellect and feeling. The result is a reconstruction of one's own orientation in terms of values, group identity, prejudices, and behavior. In this sense, intercultural understanding is more than objective tolerance; it is a sympathy toward and an appreciation on its own merits of cultures other than one's own which carries over into unbiased action with representatives of that culture.

. . . the bases for intercultural understanding are to be found in all the ways which help build the inner strength, maturity, intellect, and the integration of the person. Certainly, one such avenue is thru education which includes these objectives among its major responsibilities.

Frank Dorey, Associate Professor,
Howard University, *and* Joseph Douglass,
Assistant to the Assistant Secretary,
Dept. of Health, Education, and Welfare

A Long Road

The principalship has traveled a long road in its short lifetime. Gaining momentum slowly, its pace has accelerated steadily, and it is now unquestionably "going places." It is, therefore, most important that we define its objectives, and plan carefully and deliberately the dedicated effort which will be necessary to reach our goals. With continued leadership of the kind we have been getting from our overworked national Department, and cooperation such as we have been getting from state and local associations, colleges, state departments, and interested individuals, I am optimistic about the near future as well as the long haul—provided that more than optimism is applied to the task.

Harold J. McNally, Professor of Education
Teachers College, Columbia University

NFLUENCE of EARLY CHILDHOOD

.... a Reappraisal

HAROLD H. PUNKE

In the last half century or so, the years of early childhood have been spotlighted as the time that essentially shapes the habits and characteristics of later life. As a reaction to the era when we thought a child could easily outgrow early neglect, when we said, "it will all come out in the wash," this focus on the first six years has had a salutary effect.

A pendulum, however, often swings from one extreme to the other. In recent years, it has seemed that the emphasis on early childhood has caused us to overlook somewhat the importance of subsequent years, to forget that we live in a changing world which cannot stand still in the ways it influences and shapes our lives.

When ideas reach boom proportions, it is time that they be reappraised. This is as true of ideas concerning child development as it is of ideas concerning wonder drugs, atomic power, or world government. So here let us begin to make just such a reappraisal, examining the background of the early childhood boom and the forces which today caution us to remember also the importance of later years.

A Favorable Environment

The tendency to focus attention on the first six years has arisen quite naturally during the last half century. It has come in response to a social environment which has been conducive to just such a concept.

For one thing, there has been the deep concern within our society for the individual who is weak, less competent, or less developed. Children have become a focal point of this concern and many have been the forward-looking efforts to protect them, nurture their growth, and help them prepare to take care of themselves. Products of such efforts are the child-protection and labor laws and legislation dealing with the family's responsibility toward its more helpless members. So, too, are the extensive provisions for educating all children at public expense.

Another factor is the emergence near the turn of the century of child psychology as a systematic field of inquiry. Numerous studies have appeared on the early development of children, some of which have placed great emphasis on the importance of early experience as determining what happens in later life—regarding habit formation, emotional stability, interest patterns, and other background for learning. Child psychology is important in supplying a basis for part of our educational practice, and for enabling us to make more intelligent use of a child's school years. But it does not provide all the answers.

The decline in birth rate which took place in this country from 1880 to 1940 has had a far-reaching effect in contributing to the childhood boom. One result of the decline was that children acquired a scarcity value, with parents and kinfolk eager to care for and pamper the young, anxious to cherish them as potential heirs to the family name, traditions, and property. In this situation, children acquired a status quite different from that during our early national life when they were more numerous in proportion to adults, neglected during their early years, and considered important only as they became able to make economic contributions to the family.

The economic drives of American society have had their influence, too. The steady rise in personal income and in living standards of the average American have made more funds available for studying child growth and for providing the material things with which to cater to the younger set. Closely linked to this has been the strong profit motive of a private enterprise

Harold H. Punke is Professor of Education at Alabama Polytechnic Institute in Auburn, Alabama.

economy. As society has come to focus attention on the young child, industry has been quick to play upon this interest, manufacturing a wealth of baby foods, toys, clothing, furniture, and other items intended especially for children. To some extent, the same applies to the writing and publishing of literature appropriate for children at different maturity levels. The pull of the market has also been significant in stimulating the development of literature *about* children—in popular magazines, newspapers, and radio and television broadcasts.

The focus on early childhood also found reinforcement in some of the traditional mores of society. Note, for example, crisp epigrams like these: "As the twig is bent, so grows the tree;" or "Give me the child up to the age of six and I will build up the church." Thru such oft-quoted clichés, concepts are often perpetuated beyond the point of their original validity.

Other Forces Now

Several recent developments in American society point to an increasingly elaborate and varied post-childhood life. These are forces which may be overlooked in the midst of our current emphasis on the first six years as a determiner of personality and life patterns. These factors constitute a stronger influence for changing impressions and attitudes of early childhood than was present some two generations ago.

One such development stems from the advent of mass higher education. An increasing percentage of Americans now go thru high school and on into college. From this experience, the nation's youth are finding their physical, emotional, and intellectual horizons extended and challenged, and often are modifying their earlier goals in the light of later experience. This is quite a different situation from that of a few generations ago when people entered upon the repetitive routines of their vocation fairly early in adolescence. When one begins simple vocational activities at an early age, additional years do not foster extended plasticity or add much that will tend to modify earlier habits and value patterns.

Along with the extension of educational opportunities in recent decades, there has also been a change in the content of educational experience. Most college students and many high school students now study the psychology of personal and group adjustments. They learn how habits are formed and modified; something about the role that aims or goals may play in life, and the importance of setting goals which seem within reach; and about how to evaluate their own intellectual and emotional capacities in the light of possible goals.

Testimony to this trend, as well as stimulation of it, is evident in the appearance of the large number of brochures and bulletins intended for high school students which have been published in the last decade. These materials deal with such matters as personal and vocational adjustment, civic responsibility, planning for marriage and home life, and budgeting time and other resources. Many presentday textbooks used in our schools—prepared by better-qualified authors than those of two generations ago—deal realistically with subjects of this kind.

Several publishers have series of booklets for adolescent Americans. One series includes over fifty bulletins written by authors of national recognition in their particular fields. Titles like these appear in this series: *Discovering Your Real Interests; Growing Up Socially; How To Solve Your Problems; You and Your Mental Abilities; Your Personality and Your Job; Understanding Our Economy; Guide to Logical Thinking.* Another series of comparable bulletins, intended for teenagers, includes such titles as: *Getting the Most Out of High School; Planning Your Career; Facing Military Service; Tobacco, Alcohol and Narcotics.*

It seems naive to act as if such materials had no influence in stimulating teenagers to modify the personalities which they developed during their first six years.

Related to these changes in high school and college offerings are the guidance programs which have sprung up in many schools and colleges, churches, public employment agencies, and other types of counseling services which operate on a fee basis. Programs of this type are intended to help young people make a realistic evaluation of their present and potential status in our society; learn to overcome some of the bad habits, as well as emotional and attitude handicaps which they acquired during their earlier years; and estimate what the future may offer as judged by recent trends in American and world cultures.

These efforts may greatly modify the personality developments of previous years.

Another force of significance in making later years more influential is the development of an increasingly varied occupational world. Today it is the exception, instead of the rule, when children pursue the same occupation as their parents. The growing percentage of women who are gainfully employed means that the vocational outlook of adolescent girls is probably quite different from that of their mothers and grandmothers. In substantial degree, the same applies to boys because of the sharp decreases in the proportion of employed men who are engaged in agriculture and other extractive industries. The kind of vocational learning which a young child might have gained from his parents in the America of a half century ago has no parallel today. Working patterns learned in childhood may have little resemblance to adult vocational life.

In the midst of this highly diversified vocational setting there has been introduced one rather universal factor which tends to separate the experiences of young adulthood even further from early childhood. This is the prospect of military service, faced by most of the male youth and perhaps by an increasing percentage of the females. In uniform, the individual experiences a way of life and even habits of thought which are quite apart from those found in the lives of most Americans before 1940.

During recent times, our prospering economy has provided more and more Americans the wherewithal to travel and thus broaden their early experiences. The learnings and influences on personality which result from travel are felt primarily by persons who are more mature than children of pre-school age. Reading stories about other lands, insofar as six-year-olds are able to read and do read such stories, is probably rather mild as a personality-forming influence as compared with the impact on the older individual who actually visits foreign countries.

Adults in this mid-century world are also being subjected to the very real influences of mass communication. Consider, for example, the extensive circulation of books, popular magazines, and newspapers. Think, too, of radio and TV programs, most of which are geared to people over six years of age. Thru these media, the individual is subjected to a barrage of stimulations which are undeniably important in their effects on thought and action.

All these developments which point to the growing influence of the post childhood period are keyed to the fact that the world is changing. And as the process of social change continues, it will become even more important to see the impact of post-childhood experiences. The early years will become a decreasing proportion of the total range of experience which one might expect his life as a whole to encompass. Moreover, the average life span is becoming longer. Hence, most people will have more years subsequent to early childhood during which their habits and personalities may change than was true of former generations. When learning, adjustment, and development are regarded as life-long processes, one should not exaggerate the importance of the initial segment of life.

How typical the persons may be who happen to read an article such as this in a professional journal is problematical. But most readers can recall influences to which they have been subjected since they were six years old, influences which have affected their lives more significantly than experiences prior to that age. Several factors contribute to this. One is that most readers have probably forgotten by now many of their early childhood experiences, altho these happenings may have left some temporary or fairly lasting residues in personality. Another factor is that such readers have probably changed more since they were six years old than has the average person. In this sense, they are not quite typical of the American population. A third factor is that such persons are probably more analytical than most—regarding critically their own personalities, goals, and prospects.

For people such as the readers of this article, then, later years have probably had a particularly strong influence. But as our society becomes more and more complex and more diversified, every one of us will find himself the product of many influences—molded by his adolescence and adulthood, as well as by his early childhood.

Certainly, this article does not mean that the years of early childhood are unimportant. They are important. But frequent reevaluation of our concepts about it is essential to keep us in step with the long-range growth and development of our culture.

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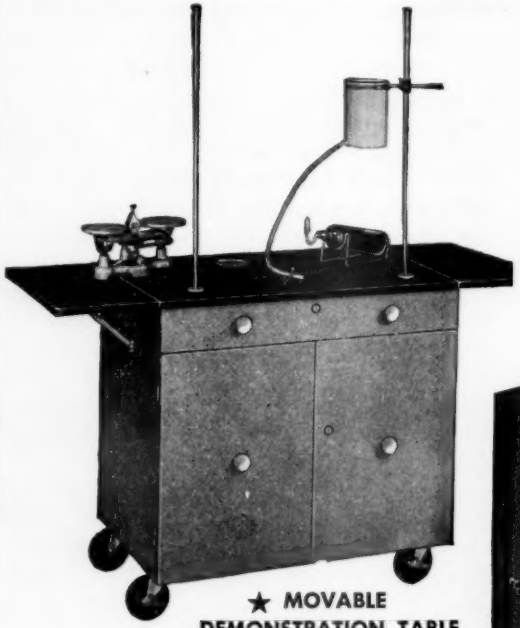

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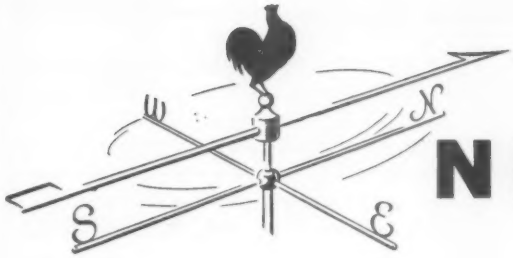

NEWS LOCAL-STATE-NATIONAL

State and Local

ILLINOIS

The Illinois Elementary School Principals Association is moving rapidly to follow up on the Department's midwest conference on preparation for the principalship, held in Indianapolis last January.

As an outgrowth of that conference, the Association's program committee is planning to give particular emphasis during the 1957 annual conference to the principal's job as an instructional leader. Since the theme of the meeting is "Science in the Elementary School," special attention will be given to the preparation a principal needs for leadership in the development of a good science program.

A special two-day conference is being planned for June at one of the state colleges. This meeting will be devoted entirely to the subject of "Preparation of Elementary School Principals."

MARYLAND

Maryland principals have had two conferences this spring. The first, sponsored by the state board of education at the request of the Maryland DESP, was held in March. The approximately 350 principals attending heard two major addresses: "Role of the Principal in Improving the Instructional Program" and "The Role of the Principal in Promoting Desirable Professional Relationships."

The second conference was a workshop held in April, the first meeting of its kind to be sponsored by the state association. Starting with a theme of "Elementary Principals—People with a Plan, a Place, and a Purpose," participants spent three days discussing the principalship in relation to the over-all system.

NEBRASKA

Omaha: The Elementary School Principals Club in Omaha, Nebraska, is making a survey of current practices in providing clerical assistance in elementary schools. By means of a two-page questionnaire, the group's professional progress committee is requesting the presidents of elementary school principals associations in about 50 large cities to provide information for the study. Omaha principals plan to use the findings in seeking more clerical assistance so they can more effectively perform their duties.

NEW YORK

In an effort to establish an adequate salary schedule for all principals in the state, the New York elementary and secondary school principals associations joined forces this year to prepare a folder called *How To Determine a Principal's Salary*. Thanks to an ingenious layout and the simplicity with which it makes its point, this is a very effective brochure.

As a basic method of determining a principal's salary, the folder sets forth this formula.

1) Use as a base the salary the principal would receive as a teacher.
2) Add 5% of base if principal has completed a sixth year of college work in administration and supervision.

3) Add 1% of base for each 10% of time spent in administrative and supervisory duties for building principals; 1.5% for each 10% for principals of districts.
4) Add 5% of base for each 100 pupils enrolled—up to 1000. (6.5% of base for each 100 pupils enrolled up to 1000 for principals of districts.)
5) Add an amount ($1000 for example) for outstanding leadership, and/or additional educational preparation beyond the certification requirements.

Total steps 1-5 for principal's minimum salary. In all cases, the principal's minimum salary should exceed that of the highest scheduled salary for teachers under his supervision.

Copies of the folder have been distributed thruout the state—to every board member, principal, superintendent, and member of the state legislature. At this writing (April 5), a bill incorporating the basic provisions of the formula, excepting step 5, has been passed by the legislature and is awaiting the governor's signature. If adopted, it will require all school districts except New York City to pay principals in accordance with its provisions.

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NORTH CAROLINA

Following the Department's southeastern regional conference on preparation for the principalship, the North Carolina DESP set up a state committee on preparation for the principalship. The committee has held two meetings and is now seeking ways to strengthen preparation programs at various colleges in the state. A statewide conference was held just recently to implement plans for this project.

NORTHWEST AREA

"Are These the Competencies of the Good Elementary Principal?" So asks the booklet by this title which has been circulated during the past year among the principals of the Northwest area—in Idaho, Montana, Oregon, Utah, and Washington.

This brochure was prepared as a direct result of the national Department's regional conference on preparation for the principalship in Spokane, Washington, a year ago. It has been used during the past several months as a basis for state surveys on the elementary school principalship.

At their meeting in April during the annual conference of the Inland Empire Education Association, Northwest area principals discussed the results of these surveys and planned for the "next steps" to continue their work.

OHIO

Leaders of the state, district, and local elementary school principals associations in Ohio met early this month for a three-day workshop. Designed to coordinate professional association activities within the state, the program offered leaders an opportunity to share ideas and explore avenues of statewide cooperation in achieving common ends.

National Department

SUMMER MEETING

If you're planning to attend the NEA's Centennial Convention in Philadelphia, June 30-July 5, you'll be interested in the Department's special program for Monday, July 1. In the morning,

Finis E. Engleman, Executive Secretary of the American Association of School Administrators, NEA, will speak. This session will be followed by a luncheon at which Rex Crawford, Director of the Institute of Humanistic Studies for Executives, Philadelphia, will be the speaker.

NEW PUBLICATIONS

Late this spring, the Department of Elementary School Principals, NEA, will publish a new bulletin—*The Flexible School.* Originally written by a committee of the New York State Association of Elementary School Principals, it is now being prepared for distribution to all DESP members as part of the current year's membership service.

Addressed directly to the elementary school administrator, *The Flexible School* deals with basic technics of planning, implementing, and evaluating change in the school program. In it are combined a sound treatment of the "why" of change and specific "how-to-do-it" help.

Among the topics treated are these: developing a school climate of flexibility, technics of good faculty planning, providing for teacher security (including the special needs of beginning teachers), problems in implementing plans for change, and criteria for evaluating the school program.

Copies will sell at $1.25 each, with regular NEA discounts on quantity orders.

Compilation of theme articles: In response to the interest shown in the current series on contemporary society, the theme articles from this year's magazine will be compiled into a single publication. Copies will be available about September 15.

MAGAZINE ON MICROFILM

The complete 35th volume of THE NATIONAL ELEMENTARY PRINCIPAL is now available on microfilm. Included are the 35th Yearbook, *Instructional Materials for Elementary Schools,* the *Membership Directory and Annual Report,* and five issues of the magazine on "The Principal's Role in Instructional Leadership."

Orders for the film should be sent to University Microfilms, 313 North First Street, Ann Arbor, Michigan. The complete volume costs $2.05.

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NOMINATING COMMITTEE

According to the provisions of the Department's Constitution and Bylaws (Article IV), a Nominating Committee of five members is elected each year by the Executive Committee. This Nominating Committee is responsible for submitting to the membership a slate of candidates for the annual election of DESP officers.

Meeting in Cincinnati, March 28, the Executive Committee chose this Committee for the 1958 election: Caleb Bucher, Brecht School, Lancaster, Pennsylvania; Melvin Moore, Edison School, Eugene, Oregon; Frances Nungester, West Decatur School, Decatur, Alabama; C. Freaman Reid, Irving School, Dubuque, Iowa; Leonor Rich, Principal, Winchester, Mass.

The Committee will meet early in the fall to make its nominations. It welcomes recommendations from individuals and especially from organized groups of elementary school principals. All such recommendations are given careful consideration. In selecting candidates, the Committee considers factors such as these:

- Professional preparation and experience—including success as an elementary principal
- Activities in professional associations
- Standing in local and state organizations
- Composition of the Executive Committee as a whole—geographic distribution, balance of men and women, representation for areas of high Department membership

INDEX FOR MAGAZINE

The first issue of THE NATIONAL ELEMENTARY PRINCIPAL next fall will include an index of all articles carried in the magazine since October 1952. Material will be listed under topical headings and will be extensively cross-indexed to provide maximum usability. This index should be an invaluable aid both for those who are on-the-job and for education professors and students. Copies will also be available separately as reprints.

1958 ANNUAL MEETING

Altho the most immediate event on the agenda for most principals right now is the summer vacation, we still think it's not out of order to mention *next* year's DESP Annual Meeting. *The place*—Philadelphia, Pennsylvania. *The dates*—March 23-26. Make a note of it!

NEA CENTENNIAL

Special postage stamp: A three-cent stamp honoring American teachers will be issued by the Post Office on July 1, 1957, during the NEA Centennial Convention. Portrayed on it is a young woman teacher conferring with a girl and boy over a map. The phrase "Honoring the Teachers of America" is printed at the top and below appears "National Education Association 1857-1957." For a first-day cancellation, send a self-addressed envelope, together with money order to cover the cost of the stamp to be affixed, to First Day Covers, Postmaster, Philadelphia, Pennsylvania.

Centennial plates: Now available are two dinner plates commemorating the NEA Centennial. One, of traditional fine china, bears the official NEA seal in gold and delft blue. It is priced at $5.00. The other, a modern coupe shape, carries the architect's drawing of the NEA building, colored in a deep-blue-green. It is $3.00. Order forms available from the NEA Staff Organization, 1201 16th St., N.W., Washington, D. C. Proceeds will go to the NEA Building Fund.

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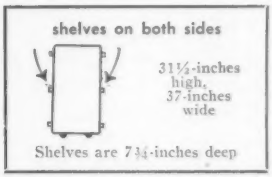

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Parents Help In Our School

Many of the services which we have always considered important in our total school program would have been greatly curtailed in recent years had it not been for our parent organization. Our enrolment has increased so rapidly that our school personnel have had to take on increased responsibilities within the classroom and consequently our parent group has assumed many activities formerly handled by our staff.

A good example is our library, which now has the services of a trained librarian only part-time. With a well-organized group of mothers as assistants, our library is open all day for the many children using it. Parents are there not only to help children select books and find reference materials but also to catalog, shelve, type, file, and arrange bulletin boards.

In the area of health they assist the nurse in weighing and measuring, giving vision tests, and keeping the health records up to date.

Because we believe that teachers need to relax during the noon hour and be free of responsibilities, mothers have assumed the supervision of the lunchroom. They have provided quiet games for the children to play after luncheon and they remain with the children until school opens for the afternoon session.

Another contribution of great help is a parent "talent file" in our office to which teachers can refer if they wish help in almost any area one could mention. Parents come to show slides and movies of their trips, to give concerts, take pictures and write school publicity, to bring in flowers and plants weekly, to conduct tours for visitors, help with parties, chaperone excursions, to assist with dramatics, put up exhibits, collect money, et cetera. The list is a long one and grows steadily.

All these "assistants" enrich our program and provide needed help for teachers. They also promote excellent public relations. Parents have really "learned by doing" and can report from their own experiences what they have gleaned about the "inner workings" of our schools. Do you wonder that we consider them among our most valuable assets? Just how we could operate our schools without them is something we do not care to contemplate!

Gertrude E. McKeon, Principal
North School
Glencoe, Illinois

Brainstorming—A Valuable Aid

A sub-committee of our local principals association was challenged to initiate an interest in the total elementary school personnel in the subject, "What Should Be the Philosophy and Goals in Our Rochester Public Elementary Schools?" This committee decided to use the "brainstorming technic"—so successful in the business world.

Careful preparation was made in advance of the scheduled evening meeting. A conference was held with the boys' adviser in the Rochester Senior High School who had done an interest study on this idea. Our committee also asked him to serve as the leader of our first "brainstorming session." An extra advantage of his being the leader was his connection with a different level of education. The invitation bulletin was sent out in advance to all elementary school personnel inviting them to this first meeting.

The first meeting was held in a comfortable room of the senior high school. Tables and chairs were set up in the shape of a rectangle. In the center was a table where two selected elementary teachers sat as the recorders. When

ideas were being given one recorder took down the suggestions of those sitting at the even-numbered tables and the other recorder recorded those of persons sitting at the odd-numbered tables. This gave them time to record the statements accurately as they were made. The leader stood at one side beside a bulletin board and a portable chalkboard.

The leader began the meeting by explaining the technic of brainstorming and how it would work. A large chart was displayed which listed the *Cardinal Principles of Brainstorming:* 1. Judicial judgment is ruled out; 2. "Free-wheeling" is welcomed; 3. Quantity is wanted; 4. Combination and improvement are sought.

The senior high school art teacher had drawn a picture of a large woman running out of the principal's office after a small frightened man. Following the explanation of the technic of brainstorming the leader invited the large group present to "brainstorm" and give the picture a caption. One of the captions which drew a laugh and helped to show how easy it is to brainstorm was, "What do you have for lunch in the cafeteria today?"

The next step was the giving of ideas on the topic of the evening. In about 25 minutes' time, the group had contributed 163 thoughts on goals and philosophy. Afterwards, each person present was given a "brainstorming follow-up sheet."

The sub-committee is going to go over ideas suggested that evening and any others turned in via the follow-up sheets. All members present will get a dittoed copy of all these suggestions—inviting additions and suggestions. A committee of teachers and principals will then be selected to go over all these reports prior to calling a general staff meeting to report their progress.

It is the belief of the sub-committee that no single way will ever be found to produce perfect solutions to all problems. Brainstorming, however, can certainly play a part. If, by its application, greater results are gained from the ability for creative thought which everyone possesses in some degree, then the time spent will be profitable and rewarding. Try the idea—you will find the results gratifying and interesting.

L. M. Pennock, Principal
Jefferson School
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CHILD GUIDANCE IN THE CLASSROOM. By Gertrude P. Driscoll. New York: Bureau of Publications, Teachers College, Columbia University. 1955. 91 p.

Someone once said that we seldom help a human being with problems by stretching him out and scrutinizing him thru a magnifying glass. It is always better to place his problems under the glass while he stands beside you and you both look thru the glass.

Gertrude Driscoll has the gift of helping people in this way. Her book is full of little anecdotes and incidents which can be looked at as one seeks to absorb the principles which underlie child guidance in the classroom. She guides the reader to achieve the viewpoint of a helper and guide rather than that of a judge or jury.

Principals often say that guidance begins in the classroom and that every teacher is a guidance specialist. Too often this ideal remains a verbal wish. A book like this, carefully read by all who work with children in a school, and then discussed in an in-service workshop, could do much to move the ideal toward reality. The book is short, it is not heavy with theory, it shows by example and incident how theory looks in action.

The book is divided into four sections: Helping Children To Grow Emotionally, Work with Children in the Classroom, Work with Parents, Help from Administrators and Specialists. This is completely in line with the modern concept of the teacher as a guidance worker who needs to know the guidance needs of children, can work with children and their parents, and who knows when to get help from the administrator and the specialist.

This book brings real children to life: teacher's pets and pests, aggressive children, timid children, procrastinators, rebellious and lazy children, as well as seriously maladjusted children. Each incident brings to light the principles of guidance and suggests appropriate types of action.

It is a worthy addition to the Teachers College series—Practical Suggestions for Teaching.

EDUCATIONAL PSYCHOLOGY IN THE CLASSROOM. By Henry C. Lindgren. New York: Wiley and Sons. 1956. 521 p. $5.00.

This is a textbook. But don't let that scare you! The author and the publisher have produced a book which does not look or feel like the sort of text which requires a professor in a college class to make it come alive. This book is for those of us who don't have time to spend a semester in school, but who want to keep up to date by ourselves.

How does a teacher help produce a citizen who is "personally, socially, and intellectually adequate and effective"? Lindgren reminds us that this may not come thru drill and recitation in school subjects. The underlying theme in his book is that every teacher must be a practicing psychologist as well as an academic scholar, that a teacher must be a student of human behavior. He points out that general, introductory psychology is not enough in the training of a teacher. The teacher needs an understanding of educational psychology with sharp focus on the teaching-learning situation in order to *apply* the principles of general psychology.

This book can help achieve such a purpose. It is thoroly up to date in the latest findings and thus becomes a fine tool for teachers and administrators who have been away from college classes for some time. It is written with many examples and anecdotes taken from real classrooms and in an interesting fictional style.

Each chapter ends with problems for discussion, full references, and suggested readings. The book is well illustrated with many fine photographs, charts, and tables. A delightful informal touch is carried all the way thru by means of appropriate cartoons.

The eighteen chapters cover the full range of things a teacher needs to know and practice: human behavior alone and in groups, theories of learning, all the different kinds of learning situations and methods, ways to evaluate teaching and learning, children with special needs, guidance services, and the psychology of being a teacher. The book is solid but not impenetrable.

AUDIO-VISUAL PROCEDURES IN TEACHING. By Lester B. Sands. New York: Ronald Press. 1956. 670 p. $6.00.

It is probably almost an axiom that the quality of learning is in direct proportion to the number of senses involved in the process. The Creator gave us five senses thru which to learn, with a sixth sense somewhat latent in most of us. The real master teachers all thru the ages have made use of sensory

education even tho the term "audio-visual" is a modern one.

Lester Sands quite properly warns that the teacher is more important than the tools he uses and that there are no foolproof methods of teaching. His book makes a good contribution to the modern methods of teaching which some of us designate as the multi-sensory way to learning. He presents them all in a very practical way, but always in relation to the user and to the art of learning and teaching.

Books on audio-visual education are not yet so numerous that new ones only duplicate. This one is organized in a very useful fashion. Twenty-three of its twenty-nine chapters deal specifically and in detail with the major types of audio-visual equipment and procedures. Each is handled in a separate chapter so as to clearly set forth its characteristics, uses, and possibilities.

This is more than a catalog of audio-visual aids; it is a book on modern methods of teaching and learning. This is a resource for every teacher to use in planning classroom experiences. There is no good excuse for exclusive reliance on a few methods or resources when so many, many ideas are available and adaptable to every teaching situation.

The book concludes with a series of six appendices listing free and inexpensive materials, associations, periodicals, and with threading diagrams for the major movie projectors.

Principals would do well to study this book and then use it to improve the audio-visual procedures in their schools.

TOWARD A RECONSTRUCTED PHILOSOPHY OF EDUCATION. By Theodore Brameld. New York: Dryden Press. 1956. 417 p. $4.50.

Everything needs balance and so we present a philosophic book to balance those which deal with the day by day tasks of teaching. Theodore Brameld takes us from our daily tasks to a contemplation of the world crisis, what it has done to our philosophies of education, and what may emerge as reconstruction begins.

Many of us have heard or read Hollis Caswell's statement that progressive education may have served its day of usefulness and his regret that there seems to be no new frontier in education today. Brameld's book is an answer to this challenge. His purpose is ". . . to point the way toward a fresh and exciting period of opportunity for democratic education." He is doing no less than proposing a new philosophy of education which he calls *reconstructionism.*

Brameld feels that we are living in an era which produces great problems and great confusions for which none of the older philosophies have answers. He points out that we have retreated from *progressivism* because the postwar world is vastly different from the world of 1916 when Dewey wrote. He feels *essentialism* as expressed by men like Arthur Bestor finds some favor in a period of confusion, as does *perennialism* such as Hutchins and Adler advocate, but that none of the older philosophies is adequate for the new age in which we live.

His book then deals with *reconstructionism* which is an emerging philosophy. He describes it as a blend of the best of the three old forms with a close identification with *progressivism.* In fact, he is frank to admit that the new form attempts to rebuild progressivism by correcting its weakest features and unifying its strengths.

Space does not permit elaboration. The book must be read to get the full impact. The author admits that the final form of a new philosophy cannot be known while it is still in the process of becoming.

This book should be read by every student of education. All of us now actively engaged in the profession are actually contributing to the reconstruction of educational philosophy. We owe it to ourselves to see what scholars like Brameld have to say about it. In a democracy, what eventually emerges will be the product of all our work.

JOHN STERNIG
Book Review Editor

Editor's Note: In the April issue of the book review section we incorrectly listed the price of *Education 2000 A.D.* by C. W. Hunnicutt. The correct price of the publication is $3.00 per copy.

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Coming Events

June 25-29: Twelfth Annual National Conference. National Commission on Teacher Education and Professional Standards, NEA. Washington, D. C.

June 30-July 6: Centennial Convention. National Education Association. Philadelphia, Pennsylvania.

July 1: One-day Meeting. Department of Elementary School Principals, NEA. Philadelphia, Pennsylvania.

July 1: Annual Summer Meeting. National Science Teachers Association, NEA. Philadelphia, Pennsylvania.

July 1-4: Annual Meeting. National School Public Relations Association, NEA. Philadelphia, Pennsylvania.

July 8-13: Fourth Annual Seminar. National School Public Relations Association, NEA. New York City.

August 19-24: Annual Conference. National Association of Journalism Directors, NEA. Chicago, Illinois.

October 13-16: National Conference of County and Rural Area Superintendents, NEA. Denver, Colorado.

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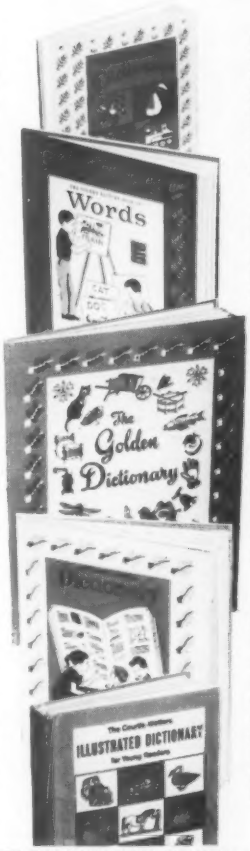

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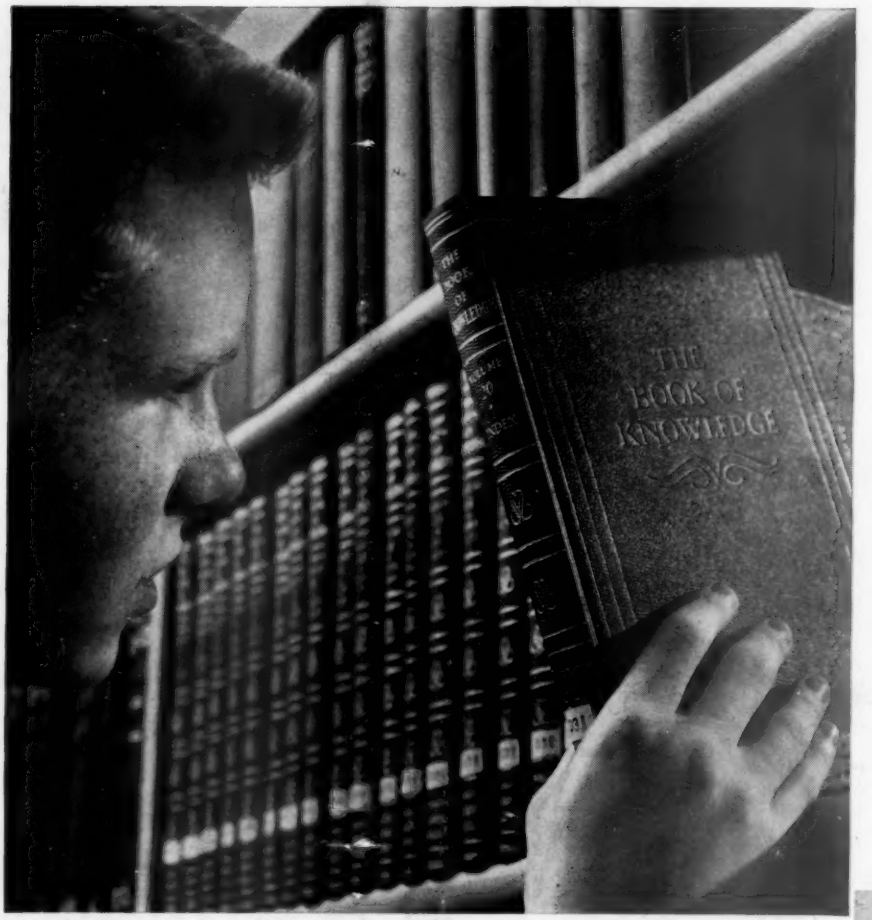

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